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EXTRACTS

FROM

REPORTS ON TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN

RECEIVED FROM SURVEYORS

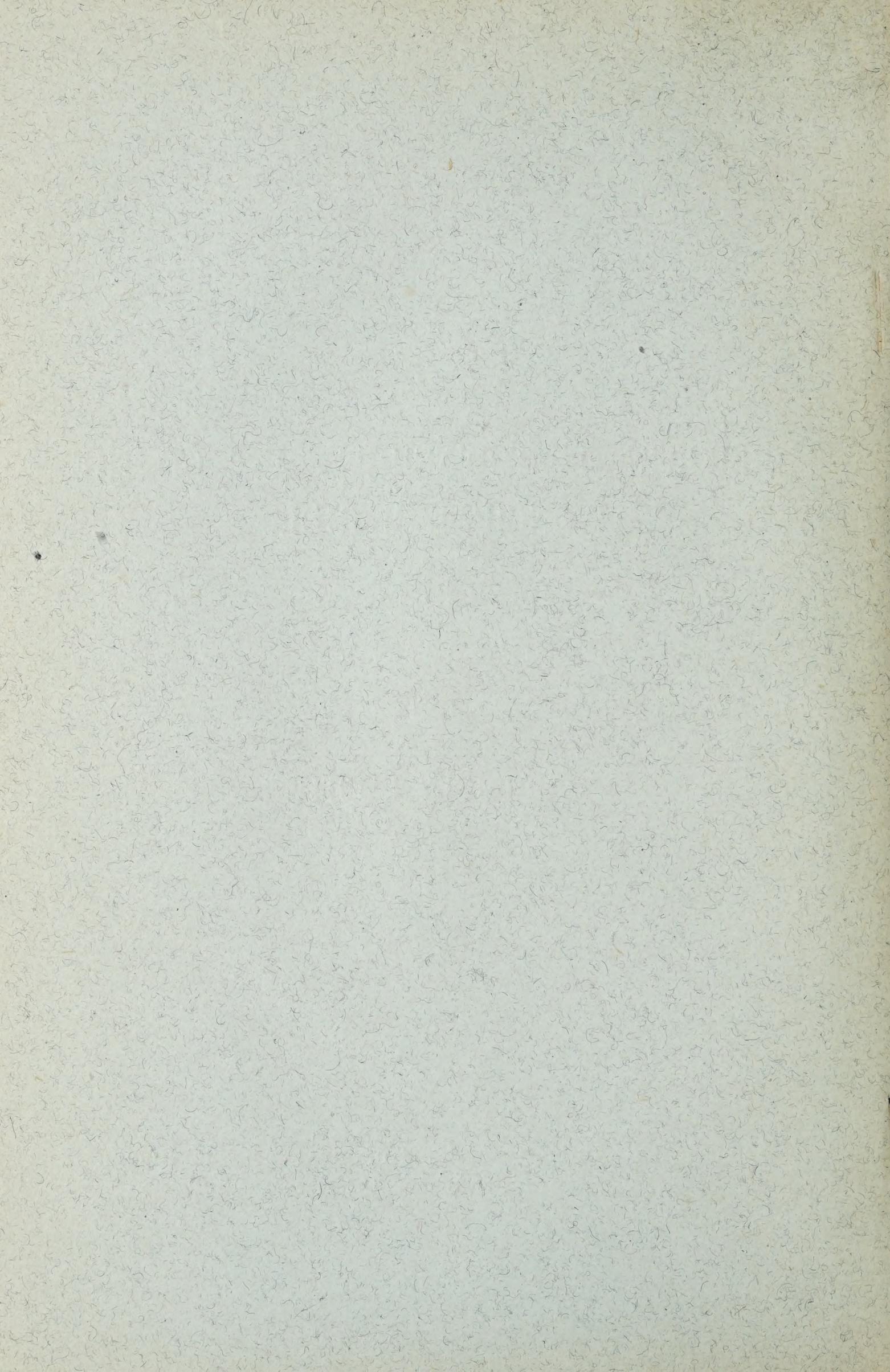
TO JULY 1, 1914



COMPILED IN THE OFFICE OF THE SURVEYOR GENERAL

Published by Authority of the HONOURABLE W. J. ROCHE,
Minister of the Interior.

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RECEIVED FROM SURVEYORS

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NOTICE.

The descriptions of townships and township outlines contained in this pamphlet have been taken from surveyors' reports on file in this office. All reports received to July 1, 1914, are included.

The townships are placed in ranges, the number of the range being at the top of the page and the number of the township in heavy figures on the left side.

E. DEVILLE,
Surveyor General.

TOPOGRAPHICAL SURVEYS BRANCH,
DEPARTMENT OF THE INTERIOR,
OTTAWA, January 28, 1915.

**LIST OF TOWNSHIPS, REPORTS ON WHICH ARE CONTAINED IN THIS
PAMPHLET.**

EAST OF THE PRINCIPAL MERIDIAN.

<i>Township.</i>	<i>Range.</i>
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 76, 80	1
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 76, 80	2
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 76, 80	3
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 76, 80	4
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 23, 24, 25, 76, 80	5
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 23, 24, 25, 76, 80	6
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 76, 80	7
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 80	8
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 24, 25, 26, 80	9
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	10
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	11
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17	12
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	13
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	14
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1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16	16
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TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN

RANGE 1.

- 1.** (*West outline.*)—This line runs through an undulating prairie. The soil is first-class clay loam and is suitable for agricultural purposes. There was no timber seen and no water found.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The soil consists of the best clay loam, and is very fertile and beautifully undulating. The only timber grows on the banks of the river aux Marais; it is very limited in quantity. The surface is dry, but water can easily be obtained by digging a moderate depth.—*L. Kennedy, D.L.S., 1874.*

- 2.** (*North outline.*)—This line passes through an undulating prairie. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*West outline.*)—This line passes through an undulating prairie, the soil of which is a first-class clay loam and suitable for agriculture. There was no timber seen and no water was found.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The soil in this township is very good and is well adapted to farming purposes. There is no running water in this township, but many parts of the northwestern sections are low and marshy during the spring months. No timber is available nearer than the Red river which is 5 or 6 miles distant from the centre of the township.—*L. Kennedy, D.L.S., 1872.*

- 3.** (*South outline.*)—This line runs through an undulating prairie, the soil of which is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*West outline.*)—This outline runs through a level prairie, the soil of which is a stiff clay of second-class quality.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The soil all over the township is of first-class quality, and is the very best for the production of all kinds of grain. There is no timber suitable for building or other purposes. A plentiful supply of good water can readily be found.—*J. B. Richard, D.L.S., 1872.*

- 4.** (*North outline.*)—The country along this line is an open, level prairie. The Red river flows in a northerly direction through section 35. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*West outline.*)—This outline runs through a level prairie. The soil is a stiff clay of second-class quality.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The soil throughout this township is of the very best quality, and will compare favourably with the finest in the province. There is, however, no timber which can be utilized. Good water can be found in several places.—*J. B. Richard, D.L.S., 1878.*

- 5.** (*West outline.*)—This line runs through a level prairie. The soil is a clay loam of first-class quality, suitable for agricultural purposes.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is composed of high dry land with a very rich soil. It is open prairie with the exception of one poplar grove in section 33, three-fourths of a mile long by one-fourth broad, and a few small patches of willows. The Morris river runs in a southeasterly direction through the township.—*J. A. Snow, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

- 6.** (*North outline.*)—This line runs through an undulating prairie of first-class soil.—*L. Kennedy, D.L.S., 1871.*

(*West outline.*)—This line runs through a level prairie. The soil is a clay loam of first-class quality, suitable for agricultural purposes.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The soil of this township cannot be surpassed for richness. Its surface is beautifully diversified with dry prairie, suitable for cultivation, and moist prairie producing a heavy growth of wild grass. The Morris river is the only stream in the township. With the exception of a few willows in the southwest angle, and a small part of the poplar grove, which extends southward into township 5 in the same range, it is entirely destitute of timber.)—*J. A. Snow, D.L.S., 1872.*

- 7.** (*South outline.*)—Along this line there is an excellent open prairie, with first-class soil.—*J. Johnston, D.L.S., 1872.*

(*West outline.*)—The country along this line is a level prairie with good pasture land, but not very suitable for cultivation.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is a beautiful plain with a rich and productive soil, but totally devoid of timber and running water.—*J. B. Richard, D.L.S., 1872.*

- 8.** (*North outline.*)—The country along this line is prairie with an occasional small bluff of poplar and some hay meadow. The soil is of first-class quality.—*J. Johnston, D.L.S., 1871.*

(*West outline.*)—There is an excellent undulating prairie along this line. The soil is a first-class loam. The rivière Sale flows in a southeasterly direction across the township. A belt of timber skirts the river. The township is eminently adapted for cultivation.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township has exceedingly fertile soil. A fine belt of oak and poplar timber fringes the rivière Sale, a river so called from the smell, taste and appearance of its waters.—*J. B. Richards, D.L.S., 1872.*

- 9.** (*West outline.*)—This line runs through excellent, undulating, prairie land. The soil is black loam of first-class quality. This township is very well adapted to settlement.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is all prairie with the exception of a few small bluffs of poplar and willow. The land is high and of good quality. There is no running water in the township; the nearest is that in rivière Sale. During the time of survey the whole township was devastated by fire, which destroyed nearly all the wood growing upon it.—*D. Sadler, D.L.S., 1871.*

- 9 & 10.** (*East outline.*)—This line passes through fine rolling prairie land which is covered with clumps of poplar and willow bushes.—*J. McLatchie, D.L.S., 1871.*

- 10.** (*West outline.*)—This line passes through excellent land covered with many bluffs of poplar. The soil is a black clay loam of first-class quality.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This is a fractional township, consisting of a portion of the southern halves of the southern tier of sections. It is excellent prairie with occasional small bluffs of poplar and willow. The soil is of first-class quality.—*D. Sadler, D.L.S., 1871.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

(*South half.*)—This part of the township is excellent, dry, rolling prairie with the exception of about one-fourth which is hay land. The latter portion is low, rich bottom-land and produces a rank growth of hay. The soil of the dry land is excellent, consisting of a rich, black loam with a clay subsoil. The surface is lightly timbered with clumps of small poplar and willow.—*J. McLatchie, D.L.S., 1871.*

(*North outline.*)—The country along this line is undulating prairie with
11. occasional tracts of hay meadow. The soil is a black clay loam of first-class quality, though rather gravelly in places.—*R. W. Hermon, D.L.S., 1871.*

(*West outline.*)—This line passes through level prairie land which is suitable for pasturage. The soil is a clay loam of first-class quality.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is level prairie with a few willow bushes. Sturgeon creek, running through it from west to east and about the middle from north to south, gives this township a great advantage. The soil in general is of first-class quality, and very well adapted to agricultural purposes.—*W. Wagner, D.L.S., 1871.*

(*North outline.*)—This line passes through fine prairie land with occasional bluffs of poplar and patches of hay meadow. The soil is of first-class quality.
12. —*B. Magrath, D.L.S., 1871.*

(*West outline.*)—The country along this line is mostly pasture land. Some portions are suitable for agricultural purposes. There are a few belts of poplar and scrubby oak timber. A number of gravel ridges were found.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is a rolling prairie with a good many depressions thereon, forming meadows. Some of these meadows are covered with a most luxuriant growth of grass, reaching to 5 feet in height. In places where these meadows had been mowed the second crop of grass was found to be 18 inches high. Two crops of hay may be procured in one season with ease. A prominent ridge, running from the northwest to the southeast, contains lime, marl and gravel. There are no running streams or natural springs of water in this township, but wells have been dug by the hay-makers. One of these wells contained water to a depth of 8 feet at dry season, leading to the conclusion that a supply of water will never fail when properly looked for. At the places where the wells have been dug the section of the ground was 2 to 4 feet of black mould, and under it blue or yellow clay. On the higher prairie the surface soil has a depth of from 6 inches to 1 foot, with clay under it, except in those places where the gravel predominates. There is not much wood in this township; the whole may be estimated at about 350 to 400 acres, consisting of young poplar and scrubby oak.—*W. Wagner, D.L.S., 1871.*

(*West outline.*)—This line passes through undulating prairie with bluffs of poplar and gravelly ridges. The soil is a light clay loam.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—Three-fourths of this township comes under the head of “first-class.” The soil is a rich loam, in some places mixed with gravel. The remaining one-fourth is rated as second or third-class, being covered by boulders and marshes; some of the latter are very extensive. No valuable timber is to be found, the chief being poplar, with a few scattered scrubby oak. Wild fruits, such as plums, cherries, strawberries and raspberries, and hazel nuts, are very plentiful.—*H. Lawe, D.L.S., 1872.*

(*North outline.*)—The country along this line is open prairie with a number of small bluffs of poplar. The soil is of first-class quality.—*J. L. Reid, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

(*West outline.*)—This line passes through undulating prairie with many bluffs of poplar and an occasional gravel ridge. The soil is a light clay loam.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is partially covered with poplar bluffs, the northern sections having the largest quantity. The fire having run over the greater part of them, young poplar is growing rapidly among the burnt timber. The western portion of the township is stony and gravelly, with scattering stunted oaks. There is some excellent hay land in the southeastern part. The soil is generally a fine clay loam, and water may be obtained at a moderate depth. Narrow ridges of stone and gravel are to be found throughout the township. Taken altogether, this township is well adapted for agricultural purposes.—*J. Grant, D.L.S., 1872.*

- (*West outline.*)—The country along this line is undulating with gravelly and
15. stony ridges, which are timbered with poplar. There is an occasional hay swamp.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The surface of this township is principally wooded; the best timber extends in a strip about a mile wide from the north boundary of section 35 into section 11. The remainder is more broken, and presents principally dense thickets of poplar saplings, with very bad and frequent wind-falls. The southern and eastern tiers of sections are excellent land, but the remainder is alternate marshes and ridges.—*E. C. Caddy, D.L.S., 1872.*

- (*West outline.*)—The country along this line is undulating and covered with
16. gravelly and stony ridges which are timbered with poplar. There are occasional swamps and muskegs. The soil is gravelly and not well suited for agriculture.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The greater part is covered with heavy poplar timber. The soil is generally a light loam with clay bottom, except in the northwest part, where it is mixed with limestone and gravel. Water can be obtained by digging from 15 to 25 feet in any part of the township. There is a small lake of good fresh water in the northeast and a little prairie in the southwest.—*E. C. Caddy, D.L.S., 1873.*

The soil in this township is said to be of an inferior quality, but the township is being gradually filled up with a hardy class of settlers who speak in very hopeful terms of their prospects and who will give a good account of their farming operations in the near future. The land has been stripped of whatever forest originally existed on it, and only sufficient timber remains now for fuel and the fencing and building necessities of the settlers. There are many large sloughs in this township and water is abundant.—*C. F. Aylsworth, D.L.S., 1908.*

- (*West outline.*)—The surface along this line is nearly all timbered with
17. poplar, cottonwood, scrub oak and willow. There are a number of long, narrow marshes, in some of which there is good hay and in others willow scrub. The land is high and the soil of first-class quality.—*A. H. Vaughan, D.L.S., 1874.*

(*Subdivision.*)—A large portion of the surface of this township is well wooded principally with poplar. The soil is of an excellent quality. There is a lake (Norris Lake) about 4 miles long at about the centre of the township, and a few small ponds were found in the southerly part.—*A. H. Vaughan, D.L.S., 1874.*

An effort was made to make a road into this township but we were blocked at every point by the impassable muskegs which traverse it in a northwesterly direction. Judging from the reports of hunters it is unfit for settlement. Moose are quite numerous.—*H. Lawe, D.L.S., 1898.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

The soil of this township is generally black loam from 8 to 18 inches deep with a clay or gravel subsoil. In places it is rather light being 2 to 8 inches in depth with a subsoil of gravel and stones. There are many ridges rising from the swamps and Norris lake and if the township were drained it would be fairly well suited for agriculture. A large part of the surface has been overrun by fire and is now covered with small second-growth poplar and a few clumps of good-sized spruce. There is a scarcity of building timber but an abundance of firewood for the settlers. Because of the lack of drainage good surface drinking water is scarce. The wells in the vicinity contain fair water which doubtless permeates the gravel forming the bases of the ridges all over the township.—*B. Bourne, D.L.S., 1900.*

(*North and west outlines.*)—The country along these lines is generally high,

18. undulating and timbered with poplar, balm of Gilead, cottonwood and willow.

Much of this timber, however, has been killed by fire. There is an occasional small willow swamp. The soil is of a first-class quality. Dennis lake is intersected by the north boundary of sections 33 and 34. There is some good hay land along the shores of this lake.—*A. H. Vaughan, D.L.S., 1874.*

(*Subdivision.*)—This township is well wooded, the timber consisting principally of poplar with a small quantity of spruce. The surface is well watered. The soil is of good quality. A large part of the township is suitable for settlement. There are a few swamps and muskegs but they can be easily drained.—*A. H. Vaughan, D.L.S., 1874.*

With the exception of section 18 that portion of this township which we surveyed was covered with water varying in depth from 6 inches to 2 feet, and will not be suitable for settlement until it is drained.—*A. F. Martin, D.L.S., 1902.*

The soil in this township has been rated as third-class, but when the stones are removed and the water drained off the land will become first-class. Some of this land is very stony—in some places the ground is paved with stones, but they are all removable and it will not be long before they are removed by the industrious Galician settlers on this land. Many of the stones are creamy, white limestone which the settlers use for making lime. The soil is suitable for all kinds of farming and there is considerable hay throughout the township. This hay is not of a first-class quality but it is almost certain that the best of timothy and clover may be grown here as the soil and climate are quite satisfactory. The area surveyed has been practically denuded of what was formerly a heavy growth of large poplar timber. There still remains, however, enough for building and fuel requirements for some years. There are no minerals. Game is becoming scarce. As there are no creeks of any importance there are no water-powers. The township may be reached from almost any direction, but during the wet seasons the route by Inwood, in township 18, range 1, would be preferable.—*C. F. Aylsworth, D.L.S., 1912.*

The south two-thirds of this township is largely occupied by Dennis lake and

19. a small lake to the north of it. These lakes are very shallow and in a great many places it was difficult to designate the shoreline. The north third of the township, although elevated very slightly above the lake, contains some very fair land which is undulating in places but as a rule rolling. A road has been cut across the northerly portion of the township by the Government. In the southwesterly corner there is some very high land consisting of limestone ridges with the rock exposed in a good many places. The soil in this vicinity is very poor and is composed of from 1 to 2 inches of alluvial deposit over sand and gravel. In the northerly part of the township the soil is of the same nature but with clay appearing instead of sand and

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

gravel. The whole township has been burned over several times. With the exception of some green timber in sections 12 and 13, all the large timber is dead and the surface is now overgrown with small poplar, willow and some spruce varying in age from 4 to 12 years.—*H. B. Proudfoot, D.L.S., 1901.*

A line drawn from the southeast angle of the township to the northwest angle
20. will be approximately the dividing line between the wet and dry portions.

To the northeast of that line the country is exceedingly wet and worthless, while to the southwest the land is wet in places only, and to the extreme southwest it is high and rocky. Three lakes in the northeast portion have been surveyed and there are also large tracts of muskegs which would be very wet in the summer months. In these swamps numerous springs are met with, from 10 to 50 feet in diameter, with a great flow of water which is immediately swallowed by the surrounding muskegs. The water in these springs never freezes in the winter and in several of them, hundreds of frogs were seen alive in March. Most of the southwest portion has been burned over at different times and there is now no timber of any value in the township.—*H. B. Proudfoot, D.L.S., 1901.*

The two southerly tiers of sections of this township are very wet, with large
21. muskegs and a few lakes. The northerly part, although there are some large swamps, is generally rolling land, the soil being from 4 to 10 inches of black loam over clay with gravel in some places. A large tamarack swamp occupies the northeast corner of the township and extends into township 22, range 1, and townships 21 and 22, range 2. The timber is fairly good, being poplar, balm of Gilead, spruce and some tamarack, which would all average from 6 to 14 inches in diameter.—*H. B. Proudfoot, D.L.S., 1901.*

(*North outline.*)—Running westerly the country for a distance of about $3\frac{1}{2}$
22. miles is swampy and covered with patches of spruce, tamarack and poplar. The remainder of the line runs through higher land covered with fair sized poplar.—*R. Bourne, D.L.S., 1900.*

(*Subdivision.*)—The southeasterly portion of this township is a succession of narrow ridges lying in a northwesterly and southeasterly direction with large muskegs and grassy swamps between them. A large grass and willow swamp in the northeast corner and a tamarack and spruce swamp to the west of it makes the northeasterly portion very wet. With the exception of a swamp in section 7, the whole of the westerly portion of the township is high and dry with a shallow alluvial soil over a subsoil of sand and gravel. It is timbered principally with a stunted growth of poplar and hazel underbrush with a few spruce of fair size in some places. Some very good spruce and tamarack are met with on the ridges in the southeast portion, and the swamp on the north boundary is also fairly well timbered. No squatters were in the township at the time of survey.—*H. B. Proudfoot, D.L.S., 1901.*

This township is generally level land and, being situated near the headwaters of Icelandic river, there is a considerable area of swamp. This river,
23. which enters the township in section 13, flows generally with well-defined banks to within a short distance of the east boundary where it becomes lost in a muskeg. The easterly portion is nearly all excellent hay land with good soil. A large tamarack and spruce swamp is met with in the central southerly portion, but the westerly and northerly parts are generally high land. The timber is spruce, tamarack, poplar and balm of Gilead, with a thick undergrowth of willows and hazel.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

Some birch is met with, but not in large quantities. The timber near the river attains a considerable size, but as a rule it is small in diameter. In the extreme northwesterly part of the township considerable rock (limestone) is met with, in some places outcropping on the surface. A trail about 3 miles in length has been cut out by the Swamp Lands commissioners near the quarter-section line in the westerly tier of sections, running north from the correction line, but as it was so narrow, we deemed it more of an exploratory line than an actual road, so did not survey it.—*H. B. Proudfoot, D.L.S., 1902.*

(*East outline.*)—For a distance of 5 miles south of the northeast corner **23 & 24.** of township 24 the land is rolling, often stony and covered chiefly with jack-pine and poplar. This region with its large areas of hay land and an abundant supply of water is best suited for grazing. Of course, for permanent settlement drainage is an absolute necessity.—*R. Bourne, D.L.S., 1900.*

(*North outline.*)—For a distance of about $2\frac{1}{2}$ miles east from the northwest corner **24.** the country is low and swampy with occasional stony ridges covered with spruce, tamarack and poplar. The surface gradually rises to the high, stony land which extends over the remaining $3\frac{1}{2}$ miles of the line. This stony land is covered chiefly by a dense growth of small jackpine with some small poplar and many windfalls.—*R. Bourne, D.L.S., 1900.*

(*Subdivision.*)—This township is situated about 25 miles in a northwesterly direction from Hnausa post office, on the west shore of lake Winnipeg, and may be approached either by means of what is known as Fisher River road or by way of Icelandic River road from Vidir. Vidir is the nearest post office being only about 2 miles southeast of the township. The soil is chiefly a sandy loam underlain by limestone gravel, or in many cases solid limestone rock. The easterly half of the township is high and comparatively dry, but the westerly portion is largely occupied by an extensive swamp, around which toward the north we found considerable difficulty in making a road. The most westerly mile of the township is composed of a high limestone plateau, which breaks off abruptly toward the east into the swamp already mentioned. This plateau is about 50 feet above the adjoining swamp lands. This township, like others in the vicinity, has been swept by fire at some time during the past few years and consequently no timber of any value was found. The general character of the surface may be described as brûlé containing a few large, dead, standing stubs and many fallen trees. The growing timber is all of very small size, from 1 to 3 inches in diameter. The swamp lands occupying portions of sections 16, 17, 20 and 21, as well as some other localities, contain a considerable amount of swamp hay, although during the time of survey, August, they were so flooded by the incessant rains as to be almost inaccessible and entirely too wet to admit of cutting. Most of the northeast and easterly part of this township is comparatively high and dry, but a large amount of water was found on the westerly and central sections lying immediately to the east of the pronounced limestone ridge, before mentioned, which occupies the greater part of the westerly tier of sections. No creeks or ponds were met with and no water-power occurs in this township. Judging from the growth of vegetation in this locality I would say that the climate is quite favourable for the pursuit of general farming. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly warm, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold, 40 below zero being about the lowest temperature recorded during the past winter.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

The fuel supply of this township is limited to the standing dead or fallen timber, which however in some localities is very abundant, particularly in the eastern portion of the township. A large amount of limestone rock outcrops in the more westerly portion of this township and although much weathered and of a very shaly nature where exposed on the surface, it is quite possible that if opened up as a quarry it might yield a fairly good building stone. Other than the limestone no minerals of economic value are known to occur in this township. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1907.*

25. The township is situated at a distance of about 35 miles in a northwesterly direction from the village of Hnausa on the shore of lake Winnipeg, and may be most easily approached by means of a fairly good wagon road from that place, Vidir, being the next post office, from which place it is only about 10 miles distant. A large percentage of the soil of this township is of a very rocky character, bare limestone appearing at the surface in very many places. The southwesterly portion of the township is particularly rough and rocky and is scarcely suited for agricultural purposes. The northeasterly part of the township, though rocky in places, contains a large amount of swamp land. The surface of this township is considerably broken and hilly, although no very great elevations occur. The most conspicuous hill in the township has an extreme elevation above the surrounding country of about 50 feet and passes in a northwesterly direction through sections 12, 11, 14 and 15, and is of a very rocky character. The greater part of the township, like others in the locality, has been burnt over within recent years, so that little living timber of any value remains. In some sections there is a large quantity of standing dead timber which, if available for market would be of very considerable value. The southwesterly part of the township which, as already stated, is of a rocky character, lies at a comparatively high elevation and is quite dry, but to the northeast it is quite wet, containing in addition to a large tract of swamp land, a lake of considerable size (Lee lake) occupying parts of sections 23, 24, 25, 26, 35 and 36. No timber of any value now remains. This township being of a rather dry, rocky character, comparatively little natural hay was found. Some, however, occurs in sections 3, 4, 7, 8, 9, 17, 20, 21, 33 and 34. The northeastern part of this township is well supplied with water from the lake already referred to upon sections 23, 24, 26, 35 and 36. A small creek passes through sections 6 and 7 and during the early part of the summer contains a good flow of fresh water; but this is not constant and it was found to be completely dry during the latter part of the season. In addition to the above sources there is also a large surface supply in the extensive muskegs in the northeasterly part of the township. No water-power occurs in this township. The climate of the locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist on account of the proximity of the great lakes both to the east and west. Hard frost sets in about the middle of November sufficient to freeze the swamps and smaller lakes. Snow usually follows within a week or two. The climate seems to be quite favourable to the successful growing of oats, barley, wheat and all the ordinary root crops, for these were successfully grown during the past summer both in township 25, range 1, west of the Principal meridian and at Fisher River mission. There is an abundant fuel supply in this township in the form of dead timber which is still standing in large quantities. This township being of a very rocky nature with many limestone exposures at the surface may at some time furnish stone for building purposes, but as yet no quarries have been opened. No minerals of economic value are known to exist in this township. Moose are numerous. Elk or wapiti are also found

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the latter being very scarce.—J. W. Tyrrell, D.L.S., 1908.

This township can be most conveniently reached by the Fisher River trail from

26. Hnausa or Icelandic River. The soil is of inferior quality, being either rocky or swampy and not well suited for general farming. The surface is generally level but broken by gravel ridges from 8 to 15 feet in height in sections 2, 3, 9, 10, 14, 15, 16, 21, 22 and 31. The whole surface is wooded but the only merchantable timber is found in sections 23, 24, 25, 26, 35 and 36. There is not enough to be set aside as a timber berth. Owing to the many marshes and muskegs, marsh hay is abundant, especially in the eastern and northern parts. Surface water is abundant and fresh, but no water-powers occur as the land is comparatively level. The climate is subject to extremes, but summer frosts do not occur. Wood fuel is abundant, but no coal, stone-quarries nor minerals were found. Game consists of moose, black bears, elk, grouse and prairie-chickens.—J. W. Tyrrell, D.L.S., 1910.

The Fisher River trail passes through this township which is situated about

27. 40 miles from Icelandic River. The soil is of inferior quality, a large portion of the surface consisting of swamps and muskegs separated by stony, gravel ridges. Except those parts covered by muskegs and hay meadows the surface is wooded with poplar, spruce, tamarack and jackpine from 2 to 8 inches in diameter. Portions of the township have been burned over within the past few years destroying any valuable timber which did exist, and leaving large areas of brûlé, especially in sections 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 28, 29, 30, 34, 35 and 36. The numerous muskegs and marshes produce a great amount of hay, much of which is cut and used for fodder. These hay meadows occur in sections 13, 14, 15, 16, 17, 19, 20, 22, 23, 24, 28, 29, 30, 31, 32 and 33. Fresh water is abundant but only in marshes and muskegs, and there are no water-powers. The climate is subject to extremes, but fruits and grain are regularly raised at Fisher River mission. Wood fuel is abundant but no coal is found. The rock formation of the township is limestone, but no quarries are found, and no minerals are known to exist. Moose, black bears, elk, grouse and prairie-chickens are the varieties of game found.—J. W. Tyrrell, D.L.S., 1910.

This township is situated immediately south of Indian reserve No. 44, which

28. adjoins the southern extremity of Fisher bay of lake Winnipeg. A road, known as the Fisher River road passes from the mission station at Fisher bay through the northeasterly part of this township in a southeasterly direction to Icelandic river on the shore of lake Winnipeg. By means of this road this township is accessible from either place, except during the wet seasons, when the portion of the road through the south of it is next to impassable. The soil of this township is chiefly of a very stony character and will be more suitable for ranching than for farming purposes. The surface is comparatively level with slight variations in elevation, the higher portions of which are of a rocky nature, whilst the lower ground is occupied by tamarack swamps and muskegs. The surface of the higher country is chiefly covered with small poplar and the swampy country with tamarack. A limited quantity of big spruce, tamarack and poplar occurs in the northeasterly sections of the township immediately adjoining the south boundary of the Indian reserve, but beyond this locality there is no timber of any considerable value. A considerable amount of marsh hay occurs in sections 1, 5, 6, 15, 16, 17, 18, 21, 22, 24, 29, 30,

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

31 and 32. —The only water supply found occurs in the muskegs occupying parts of sections 13, 14, 15, 16, 17, 21, 22, 29, 30, 31 and 32. No water-power occurs in this township. The climate of the locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist on account of the proximity of the great lakes both to the east and to the west. Hard frost sets in about the middle of November sufficient to freeze the swamps and smaller lakes. Snow usually follows within a week or two later. The climate seems to be quite favourable to the successful growing of oats, barley, wheat and all the ordinary root crops; these were successfully grown last summer both in township 25, range 1, west of the Principal meridian and at Fisher River mission. The only kind of fuel found in this township is a limited amount of large timber occupying a portion of the eastern sections of the township, where there is a considerable amount of poplar, jackpine, spruce and tamarack, sufficient for local supply. This township being of a rocky character with many limestone exposures may at some time furnish stone for building purposes, but as yet no quarries have been opened. No minerals of economic value are known to exist. Moose are comparatively numerous. Elk or wapiti are also found and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the latter being very scarce.—J. W. Tyrrell, D.L.S., 1908.

This township is situated near the western shore of Fisher Bay of Lake Winnipeg and immediately north of Fisher River Indian reserve. It is easily accessible from either place. The soil is chiefly black loam on a heavy clay subsoil. This is particularly true of the eastern part of the township which is divided into two parts by a small lake known as Goldeye lake because of the number of fish of that name found in it. A gravelly jackpine ridge extends through the western part of the township, and sections 10, 15 and 22 form the basin of Goldeye lake, which is a shallow body of fresh water. A small lake lies near the western shore of Goldeye lake. Both these lakes are surrounded by marshes. The surface of the township is generally flat or slightly rolling, and is, for the most part, covered with timber. The chief varieties of timber are white poplar, spruce, tamarack, balsam, birch and jackpine. Many of the poplar, spruce and tamarack trees vary from 8 to 30 inches in diameter, especially in sections 1, 2, 3, 4, 5, 8, 9, 11, 12, 13, 14, 17, 18, 19, 20, 23, 24, 25, 29 and 35. Although there is in this township a very considerable amount of timber, it is greatly scattered and will be required by the settlers at Fisher River mission as well as by future settlers in the township. There is some fine hay land in the southwestern part of the township and around the shores of the lakes mentioned above. In addition to these two lakes there is another small like in the eastern part of section 36. All the lakes contain good, fresh water. No water-powers exist in the township. Fuel in the form of timber is plentiful. No stone-quarries are known to exist and there are no minerals of economic value. The climate is subject to great variations of temperature, ranging from 40° below zero (Fahrenheit) in winter to 100° above zero in summer. It is not, however, too severe to admit of the successful production of wheat, oats and a great variety of root crops. These are grown from year to year at Fisher River Indian mission where Mr. Stevens has quite a model little farm. Game is not so plentiful in this township as in others more remote from settlements, but moose and other wild animals are occasionally seen.—J. W. Tyrrell, D.L.S., 1910.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

This township is situated close to the western shore of Fisher bay of Lake 30. Winnipeg, and is most easily accessible from that body of water. It may, however, be reached by a wagon trail from Fisher River mission, which trail is good for travel throughout summer and winter. The soil of the western and central parts of this township is of a very stony nature, but the eastern part is composed of black loam on a clay subsoil. A ridge of sand and gravel extends in a northerly and southerly direction from the western half of the township, but the eastern half is flat or very slightly rolling and wet or mossy on the surface. Comparatively little valuable timber now remains in this township, the greater part having been destroyed by fire some years ago. Small quantities of heavy timber consisting of spruce, tamarack, poplar, birch and balsam, ranging from 6 to 24 inches in diameter, are found in sections 1, 12, 13, 21, 22, 24, 25, 26, 27, 30, 31, 32, 33, 34, 35 and 36, but the quantity is not sufficient to justify its reservation as a timber berth. Some natural hay is found in sections 17, 18, 23, 26 and 34. With regard to the water supply, this township is not only situated close to the shore of Fisher bay but also contains a small lake in sections 23 and 26 and, in section 34, the southern end of a lake. All these bodies of water are fresh. No water-powers exist in this township. The climate of this locality is similar to that of the whole district, being subject to extreme heat in summer and intense cold in winter. It is not, however, unsuited for the successful growing and ripening of wheat and oats as well as a great variety of root crops. There is an abundant supply of fuel, consisting of standing, green timber and dry, dead timber. No stone-quarries exist nor are there any known minerals of economic value. The district is known to be one of the favourite resorts of moose, and black bears are also quite numerous. Very little feathered game was seen.—J. W. Tyrrell, D.L.S., 1910.

(*North outline.*)—The line across this range is almost entirely taken up with 76. Partridge Crop lake. For information as to minerals, game and climate, see the report on township 80, range 1, west of the Principal meridian.—B. W. Waugh, D.L.S., 1913.

(*North outline.*)—The north boundary of section 31 lies in a tamarack 80. swamp which stretches for 2 miles in a northeasterly direction and about 1 mile southwesterly. Sections 32, 33 and 34 are high and undulating, the timber being burnt spruce and jackpine, from 2 to 4 inches in diameter. In section 35 the Odei river, a tributary of the Burntwood river, is crossed. The banks of this stream are from 100 to 200 feet high on the lower part, but are very low and swampy in the upper part. Over a stretch of 3 miles in sections 25, 36, 35 and section 2 of the township to the north there a drop of nearly 100 feet, affording good water-power. Whitefish and sturgeon are found in this river. In section 35 the line passes through a dense growth of green spruce, poplar and birch, from 2 to 6 inches in diameter. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—B. W. Waugh, D.L.S., 1913.

RANGE 2.

The general character is a beautiful rolling prairie, sheltered from the north-west winds by the river aux Marais timber belt, and from the east winds by the Red river belt. It is wooded only on the border of the river aux Marais. The timber consists principally of oak and basswood, with scrub. The oak and basswood are of sufficient growth to be suitable for building, but there is only enough for the

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

use of the occupant of the section in which it grows. Water is found in the river aux Marais and there is a small lake in sections 11 and 14. Good water may, however, be readily obtained by digging to a moderate depth.—*L. Kennedy, D.L.S., 1872.*

- 2.** (*North outline.*)—This line runs through an undulating prairie, with many bluffs of poplar, clumps of willow and basswood and with scattered oak. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—The township is chiefly open prairie with rich soil. The banks of the river aux Marais are timbered with poplar, oak, ash and elm. Water can be obtained by digging.—*A. F. Martin, D.L.S., 1873.*

- 3.** (*East and south outlines.*)—These outlines pass through an undulating prairie with scattered clumps of willow, bluffs of poplar and a few oak, and some basswood near the banks of the Red and Roseau rivers, both of which flow through this township. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1875.*

(*Subdivision.*)—The soil is a fine clay loam. A considerable part of the centre of the township is open prairie. The eastern and southern parts are covered with scrub willow, brush and poplar. The Roseau river traverses the southern part of the township.—*J. Grant, D.L.S., 1873.*

- 4.** (*North and east outlines.*)—These lines pass over an open prairie with an occasional bluff of poplar and a few scattering oak and willow. The land is low in places. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—There is a fine ravine running through the eastern part on the banks of which are clumps of oak with a few poplar. The west side is chiefly prairie; the south side is covered with poplar, poplar brush and willow. The soil is a heavy clay loam. The township is interspersed with hay land.—*J. Grant, D.L.S., 1873.*

- 5.** (*East and south outlines.*)—These outlines run through an open prairie with an occasional small bluff of poplar and a few scattering oak and willow. The land is low in places. The soil is of first-class quality. Marsh river flows in a northerly direction through section 12.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—The soil in this township is very rich, and covered with thickets of poplars and willows, with beautiful tracts of open prairie between. There is sufficient wood for all immediate purposes, including building timber, which is abundant along the eastern side of the Red river. There is only one small stream, and this was dry in the month of July, except in holes here and there; but water was easily obtained by digging in the bed of the stream.—*J. A. Snow, D.L.S., 1872.*

- 6.** (*North and east outlines.*)—These lines run through an open, undulating prairie with a few scattered willow bushes. The soil is first-class quality. The Red river flows in a northerly direction through section 35.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—This township is all good land, being partly high dry prairie, and level, low marsh or hay land.—*J. A. Snow, D.L.S., 1872.*

- 7.** (*East and south outlines.*)—These lines run through an excellent prairie, of first-class soil.—*J. Johnston, D.L.S., 1871.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

(*Subdivision.*)—A considerable portion of the surface is wet and marshy. The greatest part is, however, dry and fit for agricultural purposes. It contains no timber of any kind.—*J. B. Richards, D.L.S., 1872.*

(*North outline.*)—The country along this line is an undulating prairie, with
8. an occasional clump of poplar and willow. There is some stunted oak along
 the rivière Sale, which flows through sections 35 and 36. The soil is of first-
 class quality.

(*East outline.*)—This line traverses an open prairie with first-class soil.—*J. John-
 ston, D.L.S., 1871.*

(*Subdivision.*)—The soil of this township is excellent for both tillage and grazing
 purposes, but it is lacking in two very essential things—wood and water. What little
 water there is in the rivière Sale is impregnated with salt. There are a number of
 small clumps of poplar, but the timber is very small.—*J. B. Richards, D.L.S., 1872.*

This township is low, wet prairie land and about one-half of it is covered
9. with small poplar and willow. Sections 1, 2, 3, 4, 31, 32, 33, as well as the
 western tier of quarter-sections, are dry prairie of good quality and fit for cul-
 tivation. Large quantities of hay are cut annually in this township.—*D. Sadler, D.L.
 S., 1871.*

About three-fourths of the south half of this township is covered with bush,
10. the chief wood being poplar which is mostly small but will be valuable for
 fencing and firewood. The soil, where timbered, inclines to sand and white
 clay but the greater part of it is first-class. The remainder of the township is good hay
 land and produces an excellent growth of hay.—*J. McLatchie, D.L.S., 1871.*

This is a fractional township, consisting of a portion of the southern halves of the
 southern tier of sections. It is an excellent prairie with occasional bluffs of poplar
 and willow.—*D. Sadler, D.L.S., 1871.*

(*North outline.*)—This line passes through undulating prairie with occa-
11. sional patches of hay meadow. The soil is a rich, black clay loam of first-class
 quality.—*R. W. Hermon, D.L.S., 1871.*

(*Subdivision.*)—There is no timber excepting a small quantity of swamp willow.
 Water is plentiful. The entire township will make valuable agricultural land. A stony
 or rocky ridge traverses this township from north to south. Stone is quarried in sec-
 tion 34 and brought to Winnipeg for building purposes; it is a soft greyish limestone.
 —*S. L. Brabazon, D.L.S., 1871.*

(*North outline.*)—This line passes through undulating prairie with a few
12. patches of good meadow land. There are a number of gravelly and stony
 ridges in sections 32 and 34. The soil is of first-and second-class quality.—
B. Magrath, D.L.S., 1871.

(*Subdivision.*)—This township is for the most part an open prairie, there being
 but three or four groves of poplar, a few oak and some swamp willows intermixed
 with it. It is quite likely that the whole of this has been since destroyed by fire.
 With the exception of some small areas of alkaline land, where a very scanty herbage
 grows, the entire township may be classed as very superior agricultural land.—*S. L.
 Brabazon, D.L.S., 1871.*

13. (*East outline.*)—Section 1 is an open prairie with a first-class soil. The
 remaining sections are low and wet.—*B. Magrath, D.L.S., 1871.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

(*Subdivision.*)—The southeastern two-thirds of the township is chiefly open prairie of the best description. The soil is composed of black vegetable mould from 8 to 12 inches deep with a subsoil of clay and gravelly loam, and cannot be surpassed for richness. The northwestern part is principally barren; the soil is a gravelly loam and somewhat stony in places. It is thickly covered with bluffs of poplar and clumps of willow and alder.—*J. Morris D.L.S., 1872.*

(*North outline.*)—The country along this line is open prairie, with bluffs of

- 14.** poplar and willow, except in section 36 and part of section 35, where it is marsh. The soil is of first-class quality.—*J. L. Reid, D.L.S., 1872.*

(*Subdivision.*)—This township is, for the most part, level prairie. An extensive marsh lies in the easterly part of the township, through which flows Jackfish creek. On the southwestern part there is a good deal of poplar, a large portion of which is fit for building purposes. There are some small bluffs of poplar on some of the prairie land. The soil is generally loam mixed with clay.—*E. C. Caddy, D.L.S., 1872.*

The surface is generally undulating, except in the extreme east where the

- 15.** land is low and flat. In this vicinity there is a large extent of hay land.

This township is well wooded. The timber is principally poplar, of large growth, good for building purposes. The soil is chiefly rich loam mixed with clay. It is well supplied with water from springs and small streams, and water can be obtained by digging from 12 to 15 feet in any part of the township.—*E. C. Caddy, D.L.S., 1873.*

The surface of the township is rolling prairie in the easterly and southerly

- 16.** parts. In the northwest portion there is a large quantity of good building timber, chiefly poplar, with some spruce and oak of good quality. The township is well supplied with good water from springs and small streams. The soil is a deep, rich loam, with a clay bottom.—*E. C. Caddy, D.L.S., 1873.*

- 17.** A large part of this township is well wooded, the principal timber being poplar. The soil is of excellent quality.—*A. H. Vaughan, D.L.S., 1873.*

Only about three-quarters of this township is at all fit for settlement. The soil, what there is of it, is rich, but there is a great deal of surface stone everywhere. Where there is any standing timber it is of good quality and size, but it is all poplar, there being no spruce nor tamarack. The two western tiers of sections are very much cut up with deep, long muskegs, traversed by long, low, narrow and stony ridges which are covered with fallen timber and second-growth poplar and willow. The muskegs would not produce good hay even if drained.—*H. Lawe, D.L.S., 1898.*

This township is well timbered with poplar and spruce. Along the north

- 18.** boundary the land is high. There are a number of small lakes and hay meadows. The soil is generally of a first-class quality.—*A. H. Vaughan, D.L.S., 1874.*

The surface of this township is covered entirely with woods or swamps. The

- 19.** former contain some tamarack and heavy spruce up to 24 inches in diameter, part of which has been removed by lumbering, particularly in the central and southwest portions. Much damage has been done by fire in the western part of the township, but a fair supply of poplar remains, fit for house logs, etc., and an abundance of good firewood is found where the fire has run. There is a little birch

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

and small oak in the eastern portion. The soil is, except in some places, a rich loam or leaf mould of fair depth with a clay or gravel subsoil, and if the swamps were drained the returns from agriculture would be good throughout the township. Gravel, suitable for concrete or road-making, is found in ridges crossing the township from northwest to southeast in several places. Some fair streams run through the township during a large part of the year. A good colonization road has been opened up to Gimli across the northern part of the township, and the Galician settlers have made a fair road from the centre of the township to the same place. A good road also runs south to Teulon, in township 16, range 2, and we have made passable trails near the north and east boundaries and in the southwest portion of the township.—*R. Bourne, D.L.S., 1900.*

The large muskegs met with in township 20, range 1, extend into the westerly

20. portion of this township, and a small amount of brûlé was also encountered.

There is some very fair timber, poplar and spruce, in the northeasterly portion, but in the remainder of the township the timber is small. The soil is very poor, consisting of only an inch or two of alluvial deposit with a gravel subsoil and is mixed with large stones and sand in many places.—*H. B. Proudfoot, D.L.S., 1901.*

The easterly part of this township is fairly good land and comparatively dry

21. and is timbered with a good growth of poplar and spruce with some fair tamarack in places. The northwesterly and southwesterly portions are very wet.

A branch of the Icelandic river, which is met with on both the north and south boundaries, is very seldom seen in the main portion of the township as it flows underground or is lost in the muskegs. A portion of the southwesterly part of the township was slightly burned several years ago. Numerous small streams are encountered along the north boundary flowing to the large muskeg in the township to the north.—*H. B. Proudfoot, D.L.S., 1901.*

A great part of the southeast portion of this township is a large muskeg with

22. bluffs of tamarack and willow. Although this muskeg is very soft in places it could be easily drained as there is a good fall to the Icelandic river. After

the water once starts to run in a small ditch 18 inches wide, it very shortly makes a deep and wide channel which effectually drains the adjoining land. Settlers in the adjoining township state that by this way of draining, it takes about 4 years to convert this wet muskeg into arable land. A large spruce and tamarack swamp was found in the southwesterly portion of the township, but there is not much timber of large size. The land adjoining the Icelandic river is high and comparatively dry, and is timbered with large poplar and balm of Gilead. There has been some large spruce in this township but it was lumbered some time ago. A large muskeg with a hard bottom containing some very good hay land, is crossed by the north boundary. There were a large number of settlers in the township prior to the survey.—*H. B. Proudfoot, D.L.S., 1901.*

The surface of this township was swept by fire some 15 or 18 years ago, and

23. with the exception of a few small areas which were only scorched, the timber has been destroyed. Very little of the dead timber is now standing but the logs lie thick on the ground and testify by their size that it was well timbered at one time. The large timber still standing consists of spruce and poplar with some tamarack, but no large areas of it are found. The remainder of the township is now covered with a thick growth of small poplar and willow. The Icelandic river enters a very wet muskeg near the west boundary and issues

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

therefrom in three small streams on the north boundary of section 6. The surface generally is slightly undulating, and the soil is rich but very wet. Although pasture and hay are plentiful the land has been rated from second-to fourth-class for agricultural purposes.—*H. B. Proudfoot, D.L.S., 1901.*

This township which is situated about twenty miles to the northwest of
24. Hnausa on the shore of lake Winnipeg, is most easily approached from there by way of what is known as the Fisher River road, which passes through the northeasterly sections of the township. During wet seasons the condition of this road is extremely bad, almost impassable, while during dry seasons, or in the winter time, it affords a first-class means of transportation. The general character of the surface soil of this township is that of a sandy loam, approaching gravel in many localities and it is underlain in most places by limestone gravel or rock. For the most part the surface is comparatively level, although several gravel ridges occur in it, the most notable of which passes in an easterly and westerly direction through the northern tier of sections and forms a remarkably well defined ridge about 30 feet in height. In addition to these gravel ridges there is a cliff of limestone about 40 feet in height which extends in a northwesterly direction across sections 29, 32, and 31. From the centre of this township and extending about one and one-half miles towards the west there is situated a very extensive, soft muskeg, over which we found it very difficult to make a crossing. Almost the entire surface of this township may be described as brûlé, fire having swept the whole district some 5 or 6 years ago. The growing timber is therefore of very small size, being chiefly white and black poplar, jack pine, scrubby spruce, tamarack and willow. A large quantity of natural marsh hay occurs in sections 3 and 4, besides in and about the large muskeg occupying the westerly portion of the township to which we have already referred. During the past season the water was so deep in this muskeg that comparatively little of the hay was accessible for cutting, but during a fairly dry season a very large amount of hay would be available in sections 16, 20, 21, 28, 29 and 32. No fresh water streams occur, but the whole western and southerly portion of the township contains an abundance of water in the hay marshes. The northeastern portion of the township is very dry, no water of any description being found. No water-power occurs. Judging from the growth of vegetation noted in this locality the climate is quite favourable for the pursuit of general farming. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summers are exceedingly warm, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold, 40° below zero being about the lowest temperature recorded during the past winter. The fuel supply is limited to the standing, dead or fallen timber, which, however, in some localities, is very abundant, particularly in the western part of the township. In the northeastern part there are some bluffs of jack pine sufficiently large to be used as firewood but they are quite limited in extent. The formation of this township, like all those of the district, is composed of limestone and in sections 29, 31 and 32 this outcrops in the form of a solid ridge of rock about 40 feet in height. The surface of this outcropping of limestone was much weathered and shaly, but it is quite possible that if a quarry were opened rock suitable for building material might be found. Other than the limestone above referred to, no minerals of economic value are known to occur in this township. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species of game found of any consequence is the moose which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1907.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

This township is situated about 15 miles west from the shore of lake Winnipeg and about 25 miles in a northwesterly direction from Hnausa post office,

- 25.** from which place it may be reached by means of the Fisher River road, which passes in a northwesterly direction through the township. The surface is exceedingly stony and rocky in character, being composed of limestone gravel, or in some cases the bare limestone rock and consequently it is not suited for farming purposes. This township is like others of the district, comparatively level, except at the extreme southeasterly corner where there is a well defined gravel ridge about 30 feet in height, passing in a northeasterly and southwesterly direction. Much of the township has been swept by fire and is therefore composed of brûlé, with some standing dead timber and an enormous amount of deadfall, through which in some places it is very difficult to travel. No timber of any commercial value occurs, the only live timber of any size being some bands of jack pine of from 2 to 4 inches in diameter. A considerable amount of natural marsh hay occurs in this township chiefly in sections 6, 7, 17, 18, 22, 23, 19, 30 and 31. The township being of a stony, rocky character possesses less surface water than most others in the vicinity. However, a lake, nearly 2 miles long occurs in the southwesterly portion of the township, occupying parts of sections 5, 6 and 7, and from the north end of this lake a wet hay marsh extends through sections 18 and 17. Good water may also be found in a large slough in the northwest quarter of section 23. No water-power occurs. Judging from the growth of vegetation in this locality I would say that the climate is quite favourable for the pursuit of general agriculture. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summers are exceedingly warm, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold. Forty degrees below zero was about the lowest temperature recorded during the past winter. An enormous amount of dry wood occurs in the brûlé district of this township, some of which is still standing, but a great portion of which is down in the shape of heavy windfall. Some green jack pine woods also occur, capable of supplying a very considerable amount of fuel for future use. Although nothing in the shape of a stone quarry has been opened up in this township, the entire surface is underlain by limestone rock, which in many places crops out on the surface. This rock though much weathered and fractured where exposed, might in all probability furnish a serviceable quality of building stone if quarries were opened up. No minerals of economic value are known to occur in this township. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—J. W. Tyrrell, D.L.S., 1907.

The most convenient way to reach this township is by the Fisher River road

- 26.** from Icelandic River settlement or Hnausa. The soil is mostly third- or fourth-class, being composed of muskegs, swamps and stony ridges, but the land could be greatly improved by drainage. Except some large areas covered with muskeg and brûlé the surface is timbered with white poplar, spruce, tamarack, birch, jack pine and balsam, mostly scattered, the poplar, spruce and tamarack measuring up to 24 inches in diameter in sections 1, 2, 7, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 28, 32, 35 and 36. An abundance of marsh hay is found, especially in the southwesterly part, and the marshes form the water supply of the township. The climate is subject to extremes and the temperature varies from 100° (Fahrenheit) in summer to 45° below zero in winter. Wood fuel is plentiful but no coal, stone-quarries nor minerals were found. The game consists of moose, elk, deer, bears, grouse and prairie-chickens.—J. W. Tyrrell, D.L.S., 1910.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

This township is situated about 6 miles south of Fisher bay of lake Winnipeg, and may be reached by the Fisher River road either from Fisher bay or Icelandic River, which latter post office is distant about 35 miles. Fisher River is the nearest and most convenient post office. The soil of this township is chiefly black loam on a clay subsoil. The surface is generally flat or slightly rolling. A large part of the western tier of sections is occupied by an extensive muskeg, so soft and deep that during the summer season passage across it is difficult if not impossible. Other extensive muskegs occur in sections 14, 15 and 22. A considerable quantity of good timber is found in sections 13, 14, 22, 23, 24 and 25, the chief varieties being poplar, spruce, tamarack, birch and balsam. This timber ranges from 12 to 24 inches in diameter and, although somewhat difficult of access, would make a good timber berth. An abundance of hay is found in various sections of this township, notably sections 13, 14, 15, 16, 17, 18, 19, 23, 26, 27, 29, 30, 31 and 32. There are neither lakes nor streams within the limits of this township but there is an abundance of surface water in the hay meadows, which are numerous and extensive. The climate of this locality is similar to that of the whole district, being subject to extreme heat in summer and to intense cold in winter. It is, however, not unsuited for the successful growing and ripening of wheat, oats and a great variety of root crops. With regard to fuel, there is an abundant supply to be found in the standing green and dry timber. No stone-quarries are known to exist, nor are there any known minerals of economic value. The district is well known to be one of the favourite resorts of moose, and black bears are also numerous. Very little feathered game of any kind was seen.

—J. W. Tyrrell, D.L.S., 1910.

This township which borders upon the southern shore of Fisher bay of lake 28. Winnipeg, may be reached by that bay or by means of the Fisher River road from the Fisher River mission, or from Icelandic River, distant from 40 to 50 miles by road. The soil is chiefly black loam with a subsoil of clay and gravel. The surface is level or slightly rolling, and about the shores of Fisher bay is low and marshy. The greater part of the township is heavily timbered with poplar, spruce, tamarack, balsam, birch and jack pine, most of which ranges from 10 to 24 inches in diameter. I would suggest that the following sections—which are convenient to the shores of Fisher bay—be set apart as a timber berth, viz.:—2, 3, 4, 9, 10, 11, 14, 15, 16, 21, 22 and 23. Hay of excellent quality may be found in large quantities around the shores of Fisher bay, and much of it is now being cut and used from year to year by the Indians of the Fisher River reserve. The chief water supply of the township consists of Fisher bay—which forms the northern boundary of the township—but surface water is also abundant in many places. No water-powers occur in the township. The climate is similar to that of all the lake Winnipeg district—being subject to extremes of heat and cold. It is not, however, too severe to admit of the successful production of oats and wheat and a great variety of root crops. The locality is abundantly supplied with fuel from the timber growing in the township. No stone-quarries nor minerals of economic value were observed. Moose and black bears are numerous.—J. W. Tyrrell, D.L.S., 1910.

This fractional township consists of a fringe of land from one to one and a half miles wide along the western shore of the southern part of Fisher bay, and is therefore reached most easily from the bay. The soil is good, being composed of about 6 inches of black loam overlying a clay subsoil. The general character of the surface is level or slightly rolling with a gentle slope toward the east. Sections 18, 19, 30 and 31 are well covered with timber of good size, ranging from 6 to 24 inches in diameter, whilst the remaining sections, 6, 7, 17, 20, 29 and 32, are com-

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

posed largely of hay lands. Every section in this fractional township either borders on or lies close to the western shore of Fisher bay, which forms the chief water supply. There are no water-powers in this township. The climate is subject to extremes of heat and cold; it is not, however, unsuited for the successful growing and ripening of wheat and oats, as well as a great variety of root crops. With regard to fuel, an abundant supply may be found in the standing green timber as well as the dry, dead timber in the township. No stone-quarries nor minerals of economic value were found. This district is well known as being one of the favourite resorts of the moose, but black bears are comparatively numerous also. Very little feathered game of any description was found in the locality.—*J. W. Tyrrell, D.L.S., 1910.*

This fractional township consists only of a fringe of land lying along the western shore of Fisher bay of lake Winnipeg, being less than one mile in width.

- 30.** It is most easily accessible by boat. The general character of the soil is good, consisting of black loam overlying a heavy clay subsoil. The surface is comparatively level and is covered with poplar, spruce, tamarack, balsam and birch, which range from 6 to 24 inches in diameter. The quantity, however, is so limited that it is probably not advisable to set it apart as a timber berth. Some hay may be found along the shore of Fisher bay, although in smaller quantities than farther south. The fractional sections of this township border on the shore of Fisher bay and are therefore well watered. No water-power was found in this township. The climate is subject to extremes of heat and cold. It is not, however, unsuited for the successful growing and ripening of wheat and oats as well as a great variety of root crops. With regard to fuel there is an abundance found in the standing green timber, as well as the dry dead timber. No stone-quarries nor minerals of economic value were found. The district is well known as a favourite resort for moose, but black bears are comparatively numerous also. Very little feathered game of any description was found in the locality.—*J. W. Tyrrell, D.L.S., 1910.*

(*North outline.*)—The country along this line is rolling and consists of

- 76.** jackpine ridges and tamarack swamps. The soil is black muck in the valleys and clay loam on the ridges. In the easterly half of section 34 and in section 35 the line crosses the Pikwitonei river, which is here widened out into a large, marshy and shallow lake. This river is sluggish stream, about 330 feet in width, flowing into lake Natawahunan near its junction with Partridge Crop lake. On this lake we crossed the winter trail from Split Lake post to Cross lake and Norway House. This country has not been burned over. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

(*North outline.*)—In section 31 the line crosses the Odei river and here the

- 80.** banks are almost sheer cliffs, from 60 to 75 feet high. The easterly portion of section 31 and sections 32 and 33 lie on the divide between the Odei and Burntwood rivers, which are here not more than a mile and a half apart and are connected by a portage. The divide at this point is merely a clay hogback, the timber being spruce from 2 to 6 inches in diameter and mostly burned. Sections 34, 35 and 36 lie in the valley of the Burntwood river. The timber is burned here also and the country near the river is rolling, but as we leave the banks it becomes more level and more swampy. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 3.

1. The surface is dry level prairie. The Joe river flows through the southwestern part, on the banks of which there is some good hay land. The soil is a sandy loam of the best description. The only timber consists of a few small bluffs of poplar in the southwestern part.—*A. L. Russel, D.L.S., 1873.*

2. This township is generally low, and well drained by the Roseau river, a fine stream having an average width of 1 chain and a depth varying from 18 inches to 4 feet, and frequently even 10 feet. That portion of the township to the north of the river has a very rich soil, and is covered with an undergrowth of willow, poplar and oak. The sections adjoining the river are in general very desirable locations for intending settlers, being well timbered with oak, poplar, elm and basswood. The greater portion of the township to the south of the river is low with a luxuriant growth of grass well adapted to stock-raising. There is no timber except on the sections along the river. The soil is a clay loam and exhibits indications of being wet in the early part of the season.—*L. Kennedy, D.L.S., 1871-2.*

(South and west outlines.)—The country along these lines is an undulating prairie with occasional bluffs of poplar and patches of willow. There are some oak, ash and elm along the banks of the Roseau river, which flows through the southeasterly part of the township. The soil is of a first-and second-class quality.—*L. Kennedy, D.L.S., 1871.*

(Subdivision.)—The township is of excellent quality for agricultural purposes. It is quite dry and generally slopes towards the Roseau river. The soil is a black loam, and the subsoil is blue clay. Large-sized oak, elm and ash fringe the banks of the river, the water of which is fresh and clear. The surface of the township is level prairie. The eastern and northern portions are open; the remainder is densely covered with small poplar and willow from 5 to 7 feet in height.—*S. O. McGinn, D.L.S., 1872.*

(North and west outlines.)—The country along these lines is open prairie with an occasional bluff of poplar and a few scattered oak and willow. The land is low in places. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1872.*

(Subdivision.)—This township may be considered first-class agricultural land. The soil is black loam on a blue clay subsoil. The southwestern sections are covered with a thick growth of scrub poplar and oak. A creek in the southwestern part of the township, contained in several places on the 2nd of July, good, clear, fresh water. Good water can be obtained in nearly any part by digging.—*S. O. McGinn, D.L.S., 1872.*

(South and west outlines.)—These lines traverse an open prairie with an occasional small bluff of poplar and a few scattered oak and willow. The land is low in places. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(Subdivision.)—This township is not well adapted to agricultural purposes, it being low and marshy in places. Nearly one-half of the township was formerly covered with timber, which has all been taken away. The Marsh river runs through the western tier of sections, which, with the adjacent tier of sections, may be said to have a very good soil.—*C. LeBer, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

(*North outline*).—Along this boundary there are a few scattered oak and **6.** poplar groves. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision*).—Sections 17, 18, 19, 23, 25, 26, 27, 29, 30, 32, 34, 35 and 36 are covered with timber, consisting of oak, ash, elm and poplar, the poplar predominating. Several small groves of oak and poplar are found in a few of the other sections. Rat river flows from the southeastern to the northwestern part of the township. The soil is excellently suited for agricultural purposes. The surface is generally fine rolling land.—*C. LeBer, D.L.S., 1872.*

(*South outline*).—The country this line crosses has an undulating surface **7.** with bluffs of poplar, oak and willow. The soil is of first-class quality.

Rat river flows in a northerly direction through section 4.—*J. Johnston, D.L.S., 1871.*

(*Subdivision*).—The land is well suited for agricultural purposes. It is wooded in the southerly part, and along the banks of Rat river.—*A. W. Lippe, D.L.S., 1872.*

(*North outline*).—This boundary traverses an undulating prairie, with occasional bluffs of poplar; there are some ash, elm, maple and stunted oak along **8.** the banks of Red river, which flows in a northerly direction through the township. The soil is of first-class quality.—*J. Johnston, D.L.S., 1871.*

(*Subdivision*).—This is a fractional township, consisting of the western and eastern tier of sections, the balance being in the settlement belt. The land is suitable for farming. Timber is scarce.—*A. W. Lippe, D.L.S., 1872.*

(*North outline*).—This line passes through excellent prairie land between **9.** the Red and Seine rivers. The country along the remainder of the line is covered with a small growth of poplar and willow.—*J. McLatchie, D.L.S., 1871.*

(*Subdivision*).—Sections 1 and 12 (fractional) are rather low and wet. Section 36 (fractional) through which the Seine river flows, is partly rolling prairie and partly covered with small poplar, oak and elm. The soil is of first-class quality, being a rich black loam.—*J. Lynch-Staunton, D.L.S., 1871.*

(*East outline*).—For a distance of about 3 miles to the north of the **9 & 10.** base line the country is marshy but would make first-class land if properly drained. North of this to the Seine river the line passes through a fine tract of rolling prairie which is dotted with clumps of poplar and willow. North of the river the land is nearly all muskeg.—*J. McLatchie, D.L.S., 1871.*

(*North outline*).—The country along this line is level prairie with **12.** patches of low willow. The soil is first-class in quality.—*B. Magrath, D.L.S., 1871.*

(*Subdivision*).—This township is fractional and consists of fine, rolling prairie land, well suited for cultivation. Salt appears in the soil in many places.—*R. W. Hermon, D.L.S., 1871.*

(*West outline*).—Along this line the country is level prairie with patches of **13.** low willow and occasionally a hay meadow. The soil is a rich black loam of first-class quality.—*B. Magrath, D.L.S., 1871.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

(*Subdivision*).—Sections 13, 24, 25, 26, 35 and part of 27, 34 and 36 are generally timbered with small poplar, oak and elm, with occasionally glades of prairie. Between this and the “Great Marsh” there is some fine meadow land. The soil is of a first-class quality. The “Great Marsh,” averaging about a mile wide, runs through the centre of the township from north to south.—*T. Cheeseman, D.L.S., 1872.*

West of the “Great Marsh” the country is generally level prairie with patches of meadow land. The soil is a rich black loam of first-class quality.—*E. C. Caddy, D.L.S., 1872.*

The “Great Marsh” is about a mile wide at the southern boundary of sections 14. 3 and 4. Going north from thence, it gradually widens out, until it occupies the whole northern part of the township, excepting sections 36 and 25. Southwest of the marsh, the land is a level prairie; east of it, it is generally prairie with many bluffs of small poplar. The soil throughout is a rich black loam of first-class quality.—*E. C. Caddy, D.L.S., 1872-3.*

The surface is generally level and low prairie, with a great marsh in the 15. centre. The soil is, however, very rich, being a strong clay mixed with loam. There is a large quantity of the best quality of hay land. There is very little large timber, but a few groves of small poplar and some oak were seen.—*E. C. Caddy, D.L.S., 1873.*

In the northeastern part of this township there is a large area of woods, 16. containing a quantity of good building timber, mostly poplar, with a few oaks of medium size. The rest of the township is hay land, low prairie and deep marsh. The soil is generally good, being a rich loam. A good supply of water is provided by the streams and springs.—*E. C. Caddy, D.L.S., 1873.*

A considerable area of this township has a good soil, and part of it is well 17. wooded. Towards the north there is considerable windfall. The southwest corner contains some fine prairie land. The township as a whole is well adapted to settlement.—*A. H. Vaughan, D.L.S., 1873.*

The central portion of this township is occupied by a great marsh which, when drained, will produce hay. All that portion lying to the north and west of the marsh is fairly good land, more or less stony in places, but still capable of producing good crops if properly worked. It will take a great deal of work to clear and clean it up. The eastern portion, lying to the east of the swamp, contains the best land in the township. The timber, though large, grows thinly and is not of a very good quality or sound. It is dying out fast.—*H. Lawe, D.L.S., 1898.*

This township contains a large quantity of excellent land. The surface is 18. generally well wooded and is slightly undulating. The northwestern part is quite marshy, and is drained by a creek of considerable size.—*A. H. Vaughan, D.L.S., 1873.*

That portion of the township lying to the east of the gravel ridge which runs through sections 2, 14, 11, 23, 26 and 35, contains the best soil, being deeper and not so stony as the rest of the township. West of the ridge there is some fairly good soil, but it is very stony in many places and cut up very much with swamps and muskegs. The northwest corner of the township is unfit for anything, being much cut up with deep muskegs which, even when drained, would not produce hay as the bottoms are stone, gravel or hardpan. There is a dense growth of underbrush in the woods, and much second growth poplar and willow, and fallen timber were encountered.—*H. Lawe, D.L.S., 1898.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

19. The western part of this township is well timbered with poplar and some large spruce and tamarack, but in the easterly sections muskegs and hay swamps are overgrown with thickets of willow and small tamarack. The soil is of light quality, and of little depth, with a subsoil of gravel and boulders. Along the western boundary, however, the land appears to be of a better quality.—*G. McPhillips, D.L.S., 1877.*

20. The soil in a portion of this township is of second-class quality, being sandy and very stony in places. The remainder consists of muskeg, and tamarack and spruce swamps. The dry land is covered with a dense growth of small poplar.—*J. Doupe, D.L.S., 1877.*

21. This township is densely covered with poplar, tamarack, and spruce. Excepting perhaps a few dry spots where poplar appears, nothing can be cultivated. The whole township is unfit for tillage. The timber is only fit for fuel and fencing purposes.—*W. Wagner, D.L.S., 1883.*

The country is very wet, and wood, water and game are plentiful.—*G. A. Grover, D.L.S., 1905.*

22. The only land in this township fit for tillage is that along the Icelandic river; the remainder is wet, and covered with a growth of tamarack and spruce of small size. Here and there are a few stony ridges, on which there is a growth of poplar and heavy hardwood underbrush. The soil consists of a layer of rich, black loam from 5 to 10 inches in depth.—*W. Wagner, D.L.S., 1883.*

23. Owing to the wet condition of the surface of this township, the whole of it is unfit for tillage, with the exception of a few lots lying along Icelandic river.

The township is entirely covered with timber, principally spruce and tamarack; there is also a considerable quantity of poplar. None of the timber is of large size.—*W. Wagner, D.L.S., 1883.*

24. This township is situated only about 6 miles from the west shore of lake Winnipeg and about 20 miles in a northwesterly direction from Hnausa post office, from which place it is accessible by means of the Fisher River road, which passes through the southwesterly portion of the township. With the exception of the northwesterly portion, which is composed chiefly of sandy clay with clay subsoil, this township is composed almost entirely of swamp land, which in some places is so soft during the open season as to be quite impassable for a pedestrian. This applies more particularly to the southerly central portion. The surface is comparatively level and is chiefly covered with small white and black poplar and swamp spruce, although portions of it consist of very soft open muskegs where little timber of any description is found. Comparatively little valuable timber exists, but heavy poplar woods were met with in sections 1, 2, 6, 12, 27, 28, 33 and 34. This township being composed chiefly of swamp and marsh land contains an abundance of marsh hay, although during the past season the greater portion of it was inundated. No water-powers exist. Judging from the growth of vegetation noted in this locality I would say that the climate is quite favourable for the pursuit of general agriculture. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly high, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter the weather is usually fine and cold. Forty degrees

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

below zero was about the lowest temperature recorded during the past winter. The heavy poplar woods already referred to contain a large amount of good firewood. No stone-quarries nor minerals of economic value occur. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1907.*

This township is situated within a mile of the west shore of Washow bay,

25. lake Winnipeg, and may be approached from Hnausa by means of the Fisher River road, which passes within about 2 miles of the southwest corner, or during the winter season it may be conveniently approached from Icelandic River by means of a road crossing the muskegs in a northerly direction, and passing within half a mile of the east boundary. The soil in the western portion is of a very stony character, underlain by limestone rock, while in the eastern portion it is chiefly of a swampy nature, apparently of little use anywhere for agricultural purposes. The general character of the surface is extremely flat with slight drainage toward the east. The western portion is composed chiefly of brûlé, while the eastern part which is of a very swampy nature is covered chiefly with small poplar scrub and swamp spruce. Very little timber of any consequence occurs, the only block worth mentioning occupying part of sections 23 and 24, where some good spruce, tamarack, birch and balsam were observed. Although this township contains a large percentage of swampy land, very little marsh hay was observed, although in many cases small quantities might be obtained, and it possible that during dry seasons much of the flooded lands might be productive of a considerable quantity of marsh hay. A large percentage of the surface is of an extremely wet character, particularly toward the east and south. In the southwest quarter of section 10 a small spring creek has its source in a pond surrounded by bubbling springs and flows in a southeasterly direction leaving the township at the southeast corner of section 3. This creek contained fine, clear fresh water and at its source was open throughout the winter season. No water-powers occur. Judging from the growth of vegetation in this locality the climate is quite favourable for the pursuit of general agriculture. No summer frosts were experienced, and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly high, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold. Forty degrees below zero was about the lowest temperature recorded during the past winter. The fuel supply is not very abundant, being limited to some small bluffs of green timber, the most notable of which occur in sections 3, 4, 16, 23, and 24. No stone-quarries, nor minerals of economic value occur. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1907.*

This township is situated immediately to the west of Washow bay of lake

26. Winnipeg, and during the winter season may be easily approached from there.

During the summer season, on account of swamps, it is, however, not easy of access from the shores of Washow bay, but may be reached by means of the Fisher River road from Icelandic River, from which latter place it is distant about 18 or 20 miles. The soil is chiefly black loam with heavy clay subsoil with the exception of the portion of the township in the southwestern corner which is occupied by muskeg. The whole surface is heavily covered with timber—principally spruce, poplar, tama-

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

rack, birch, balsam and jackpine. A large percentage of this timber is sufficiently large and good for milling purposes, ranging from 10 to 24 inches in diameter. The amount and quality of timber mentioned above is such that I would recommend the setting apart of the following sections as a timber berth, viz: 1, 2, 3, 10, 11, 12, 13, 20, 21, 22, 23, 24, 25, 26, 27, 28, 34, 35 and 36. As this township is so generally covered with timber it possesses comparatively little hay land, except the muskeg already referred to the southwestern part. There are neither lakes nor streams, but there is an abundant supply of fresh water in the muskegs and swamps. There are no water-powers. This township being close to lake Winnipeg the climate during the summer season is somewhat moist as well as excessively hot sometimes; 100° in the shade was recorded by me and 40° below zero was not uncommon in winter. Although the climate is subject to great extremes of temperature, it is not, however, unsuited for the successful raising of wheat and oats, and a great variety of root crops, as they are successfully grown at Fisher bay—a few miles to the north. The township is abundantly supplied with wood for fuel, which is found in every section. No stone-quarries nor minerals of economic value were observed. With regard to game, moose were comparatively numerous, but black bears are also known to exist. Very little feathered game was found.—J. W. Tyrrell, D.L.S., 1910.

(*North outline.*)—Sections 31, 32 and 33 are low and swampy with scrub

76. spruce and tamarack timber, while the remaining sections are rolling with burnt-over ridges of small spruce and jack pine. The soil is a good clay loam with a clay subsoil. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—B. W. Waugh, D.L.S., 1913.

(*North outline.*)—This range lies in the valley of the Burntwood river. Close

80. to the river the country is rolling and well drained. It has a clay soil and the timber is burned jackpine and spruce from 2 to 4 inches in diameter. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—B. W. Waugh, D.L.S., 1913.

RANGE 4.

The western and principal portion is level prairie with a soil of rich sandy

1. loam, dotted with small hay meadows. Proceeding eastward, a rise in the prairie occurs of about 35 feet, and to the east of this ridge the land is generally of an inferior quality, sandy and gravelly, with scattered boulders and occasional groves of poplar and willow. The eastern section is drained by a coulée, which runs in a northeasterly direction and debouches into the Roseau river.—A. L. Russell, D.L.S., 1873.

The soil in the east half of the township is light, but well adapted to the

2. growth of light grains. Granite stones are numerous. In the west half the soil is good loam. The water supply is confined principally to the northeast quarter of the township, and consists of two or three streams which retain water the greater part of the season. In the west half there is no timber of any kind. The east half has many large groves of new growth of poplar and willow.—L. Kennedy, D.L.S., 1871.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

- 3.** (*East and south outlines.*)—The country in this district is prairie with small bluffs of poplar and patches of willow. Along the banks of the Roseau river there is some oak, elm, birch, poplar and willow. The soil is of good quality, though stony in places.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—This township is of the very best quality for agricultural purposes, having a deep black loam soil with a blue clay subsoil. In general and especially along Mosquito creek the timber is of the larger class of poplar and balm of Gilead. Along the Roseau river there is a fringe of large-sized oak, elm, ash, basswood, maple, balm of Gilead and poplar. This township is well watered, having Mosquito creek in the northeast and Roseau river crossing it in the south.—*S. O. McGinn, D.L.S., 1872.*

- 4.** (*North outline.*)—This line runs through an undulating prairie with bluffs of poplar and occasional patches of willow and some oak and basswood along the banks of the Rat river. The soil is of good quality but rather stony in places.

(*East outline.*)—Along this line the surface is slightly undulating and generally covered with burnt poplar and willow. There is some large poplar, oak, elm, and balm of Gilead timber along Rat river. The land is stony, the varieties being granite and limestone.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—The western part of this township is excellent farming land with a good deep soil and a few scattered clumps of poplar. The centre is fit only for hay or pasturage, being low and flat, and in wet seasons is covered with water from 6 to 15 inches in depth. This flooding is caused by the overflow of Mosquito creek and Rat river. Mosquito creek, entering the township from the south, averages about 40 feet in width, about 4 feet in depth and contains pure water.—*S. O. McGinn, D.L.S., 1872.*

- 5.** (*East and south outlines.*)—These lines pass over an undulating prairie with bluffs of poplar and patches of willow. There is some oak and basswood along the banks of Rat river. The land is rather stony in the southeasterly portion of the township. The soil is of first-and second-class quality. The land is well drained by the two branches of Rat river.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—The soil is generally well adapted to agricultural purposes. The surface though level in parts, is considerably broken. The western branch of Rat river crosses the township from south to north, and its east branch runs through sections 24, 25, 26, 35 and 34. The water is excellent in both streams. Some rafts of timber have already been made on the western branch, and taken down in the spring season. Oak, elm, ash and poplar are to be found along the banks of both streams extending on either side from 5 to 20 chains. The timber is of good quality for building purposes.—*C. LeBer, D.L.S., 1872.*

- 6.** (*North and east outlines.*)—These lines traverse an undulating prairie with scattered willows and an occasional small bluff of poplar. The soil is of first-class quality.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—This township is well adapted to agricultural purposes, the surface being gently undulating, excepting in the vicinity of Rat river, where several ravines with small elevations are encountered. The main river, towards the south of this township, receives the waters of two streams, the larger of which is called the western branch, and the smaller the eastern branch. On the banks of both of these streams belts of timber are found, consisting of oak, ash, elm and poplar.—*C. LeBer, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

(East and south outlines.)—These lines traverse rolling prairie with an occasional small bluff of poplar, and a few hay meadows. The soil is of first-class quality.—*J. Johnston, D.L.S., 1872.*

(Subdivision.)—A large part of this township is covered by marshes, interspersed with high ridges of prairie. Timber is very scarce. Notwithstanding these disadvantages, about one-half of the township is good farming land.—*A. W. Lippe, D.L.S., 1872.*

(North outline.)—The surface of the country over which this line passes is rather low with a number of narrow ridges; between these ridges it is mostly hay land of excellent quality. There are a few clumps of poplar and willow here and there. The soil is of second-class quality.—*J. Johnston, D.L.S., 1871.*

(East outline.)—This outline crosses an open rolling prairie with an occasional clump of poplar and a number of hay meadows. The soil is of first-class quality.—*J. Johnston, D.L.S., 1871.*

(Subdivision.)—This township contains excellent land, and is well adapted to farming.—*A. W. Lippe, D.L.S., 1872.*

(North outline.)—Immediately after crossing Seine river the line enters a muskeg which extends about 3 miles to the east. To the east of this there is a strip of higher land about a mile in width which is timbered with fair poplar. The country along the remainder of the line is level prairie land with occasional clumps of willow bushes.—*J. McLatchie, D.L.S., 1871.*

(East outline.)—The country along this line is undulating prairie with bluffs of poplar and scattered poplar, stunted oak and willow brush. The Seine river flows in a northwesterly direction through section 24. The soil is of first-class quality.—*J. Johnston, D.L.S., 1871.*

(Subdivision.)—A large portion of this township consists of a deep marsh which is quite unfit for cultivation in its present state. The land is nowhere of really good quality; on the whole, the northeastern part is the best. Towards the south and east, the land is flat, with a black soil, and is generally covered with clumps of willow and poplar. Large quantities of coarse hay are cut on these lands. The southwestern part is pretty good land; to form an opinion, however, was difficult, by reason of the late fires, which had entirely destroyed every trace of vegetation, and in many cases consumed the surface soil itself.—*F. H. Lynch-Staunton, D.L.S., 1871.*

(North and east outlines.)—Along these lines the country is open prairie, with patches of willow and occasional small bluffs of poplar. There is quite a large extent of hay meadow. The soil is of first-and second-class quality.—*J. Johnston, 1871.*

(Subdivision.)—The soil is generally good, although to the south and west there is a quantity of marsh. There are no streams, and no timber of any value except for firewood is found. There is a good deal of hay land. At the time of the survey the great fire which had recently passed over the whole district had destroyed all grasses, and left the country a blackened waste; it was therefore difficult to judge of the quality of the land.—*F. H. Lynch-Staunton, D.L.S., 1871.*

(South and east outlines.)—The country along these lines is an open prairie with patches of willow brush, and an occasional small bluff of poplar. There are a number of shallow marshes with good hay meadows along the southern boundary. The soil is of first-class quality.—*J. Johnston, D.L.S., 1871.*

(Subdivision.)—The land in this township is of the best quality, with few exceptions. There is a considerable quantity of timber.—*D. Sinclair, D.L.S., 1871.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

(*East outline.*)—The country along this line has an undulating surface, with

- 12.** bluffs of poplar, scattered oak, and an occasional small swamp, in which there is a growth of small tamarack. The soil is a sandy loam of first-class quality.

—J. Johnston, D.L.S., 1871.

(*Subdivision.*)—This is a fractional township, containing only about 2,600 acres. The land is of the best quality; there are a number of small hay marshes and an occasional bluff of small poplar.—D. Sinclair, D.L.S., 1871.

With the exception of the bogs on the west side, which cover parts of sections

- 13.** 19, 30 and 31, this township is level, with a deep light loam soil, producing where cultivated, heavy crops of wheat of very superior quality. There are

numerous groves of willow, poplar and hazel scattered over the township, none of very large extent, and although thickly, they are not heavily timbered. The lands not thus occupied are chiefly covered with willow, oak and hazel scrub, there being but little prairie. Several enclosures have been made in the township, and large quantities of wheat raised by persons living on the Red river.—E. C. Caddy, D.L.S., 1872.

This township generally is level and dry, with the exception of parts of

- 14.** sections 2, 3, 10 and 11, and a large morass extending from the centre of section 6 to the centre of section 17, which makes excellent hay lands. The soil is very suitable for farming purposes, especially that portion which is covered with short oak and hazel, being a dark friable loam.—T. Cheeseman, D.L.S., 1872.

This township contains soil of very good quality and is timbered with large

- 15.** poplar, oak and willow. It is well watered by Netley creek.—H. Leber, D.L.S., 1883.

With the exception of the eastern tier of sections, this township is nearly all

- 16.** wooded with poplar of large size and best quality. There are a few hay marshes interspersed. The soil is of very good quality. There are no rivers or creeks.—H. Leber, D.L.S., 1873.

This township is bounded on the east by lake Winnipeg. The soil is of good

- 17.** quality and the surface is wooded and well watered.—A. H. Vaughan, D.L.S., 1873.

This township is bounded on the east by lake Winnipeg. The soil is of good

- 18.** quality and the surface is slightly undulating and well wooded.—A. H. Vaughan, D.L.S., 1873.

The dry land in this township has a good alluvial soil consisting generally of clay loam. The westerly portion contains considerable swamp and muskeg, but the land along the shore of the lake is fairly good. The timber is principally poplar with some spruce, balm of Gilead, ash and willow. There are many small meadows scattered throughout the township which produce good hay.—G. McPhillips, D.L.S., 1876.

This township is situated along the west shore of lake Winnipeg and contains

- 19.** the village of Gimli. Along the shore of the lake the soil is generally a good clay loam, but the western portion is chiefly spruce swamp and muskeg. The timber is principally poplar with some spruce, black and white ash, balm of Giliead and willows. Many small but good hay meadows are scattered throughout the township.—J. Doupe, D.L.S., 1876.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

This township is similar in character to the one adjoining it to the south. The
20. soil in the vicinity of the lake is good, but the western part is considerably cut up by tamarack swamps and muskegs. The timber consists of large poplar, spruce and tamarack.—*J. Doupe, D.L.S., 1876.*

There is good land in this township along the shoreline and running back about a mile and a half. The westerly part is not so good as there are a few marshes and tamarack swamps. There is a considerable amount of good large timber, consisting of poplar, spruce, and tamarack. Some very good potatoes, turnips and carrots were seen. An abundant supply of hay may be had from the meadows and marshes.—*G. McPhillips, D.L.S., 1876.*

A number of small log houses have been built along the shore of lake Winnipeg in this township. The soil for 1 or 2 miles back from the lake is of very inferior quality. The remainder of the township is composed chiefly of tamarack swamps and muskegs. The timber consists of tamarack, spruce, poplar and a few birch and ash trees.—*J. Doupe, D.L.S., 1876.*

The soil in this township is of a very inferior quality. Along the lake-shore and extending from 1 to 2 miles in a westerly direction there are only a few inches of decayed vegetable matter overlying sand and gravel. Nearly all of the remainder of the township is composed of tamarack swamp or muskeg. The surface is well wooded with tamarack, spruce, poplar and a few birch and ash trees. Along the shore of the lake and in many places in the interior of the township there are dense thickets of willow. Many settlers have built small log houses at intervals along the lake-shore and seem well contented with their locations. They spend nearly all their time in fishing, and as yet have paid very little attention to farming.—*G. McPhillips, D.L.S., 1876.*

This township is very similar in character to the one adjoining it to the south.
22. The surface is well wooded with tamarack, spruce, poplar and balsam.—*J. Doupe, D.L.S., 1876.*

This township is well wooded with tamarack, spruce, poplar and balsam. The soil is of light quality and of little depth. A few inches below the surface a hard bed of stone and gravel is encountered. The water is subject to sudden rises and falls with the changes in the direction of the wind, and the great number of large boulders, alternately uncovered and submerged, renders the navigation of large vessels near the shore extremely dangerous. The Icelanders who have settled along the coast, occupy most of their time in fishing.—*G. W. McPhillips, D.L.S., 1876.*

About one-third of the area of this township is good, dry, first-class land.
23. The general topographical features consist of low-lying ridges or gentle undulations, having a general northwesterly and southeasterly direction and composed of clay, with a covering of rich loam of varying depth. In the hollows formed by these ridges the land is wet, consisting of tamarack and spruce swamps with numerous small hay marshes and several muskegs of considerable extent. The timber on the ridges is principally poplar of small size, but sometimes attaining 15 inches in diameter. Icelandic river intersects this township and enters lake Winnipeg in section 34. For about $3\frac{1}{2}$ miles above its mouth it has a depth of from 4 to 6 feet, and an average width of about 7 chains. The land and timber on the banks of the river are the best in the township. The town plot of Sandy Bar is laid out on the southwest quarter of section 11, from which a road has been cleared through the woods to the plot of Riverton, on the Icelandic river, in the southeast quarter of section 20.—*J. Doupe, D.L.S., 1877.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

This township contains but little land suitable for agriculture. During the

- 24.** time of high winds from the north nearly one-half of the surface is flooded by the rising of the water of lake Winnipeg. Considerable quantities of tamarack suitable for railway ties and spruce timber are found throughout the township.
W. Beatty, D.L.S., 1877.

This township is situated on the south shore of Washow bay, lake Winnipeg,

- 25.** and consequently during the summer season is most easily approached by water. During the winter season it may be reached by means of a good sleigh road from Icelandic River, passing through the muskegs and into the southwest portion of the township. A large percentage of the soil is of a mossy character with clay subsoil. Some good loam with clay subsoil is found about the shore of the bay in sections 17, 18, 19 and 20, but marsh land extends for a greater or less width all along the water front. The general surface is very level with a slight fall toward the north and is chiefly covered with timber, which in some localities is of good size and quality. This township is more than usually well supplied with timber, which is composed chiefly of spruce, tamarack, birch and poplar. Some of the best of this timber varies from 10 to 15 inches in diameter and appears to be of good quality. The sections in which the best timber was noted are as follows: 1, 2, 4, 5, 8, 15, 17, 20, 22 and 24. During favourable seasons a large amount of hay land is accessible, though we were informed by a settler in section 20 that during the past season he was unable to cut any hay where he had previously done so for years. Some of the best hay sections are 8, 9, 10, 18, 19, 20, 21 and 29. This township possesses a water front to the north, Washow bay occupying the whole or part of sections 25, 26, 27, 28, 29, 32, 33, 34, 35 and 36. There are also some extensive wet marshes extending through the township from the bay in a southerly direction. No streams of any size were found nor are there any water-powers. Judging from the growth of vegetation noted in this locality, the climate is quite favourable for the pursuit of general farming. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly high, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold, 40° below zero being about the lowest temperature recorded during the past winter. This township possesses an abundant fuel supply in the heavy forest which covers a large percentage of its surface. No stone-quarries occur in this township, although on the south boundary of section 2 there is a large outcropping of limestone rock, which if opened up might furnish a serviceable quality of building stone. Other than the limestone referred to, no minerals of economic value are known to occur. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1907.*

This township borders on the western shore of Washow bay of Lake Winnipeg,

- 26.** and may be most easily reached from there by boat during the summer season or by sleigh road when the bay is frozen. Icelandic River is the most convenient post office, and is distant about 20 miles from the township. The soil of the northwestern part is chiefly black loam with heavy clay subsoil; but a large part of the township—that bordering on Washow bay—is low, flat and marshy. The general surface is level or slightly rolling, and with the exception of about 1 mile along the shore of Washow bay, is well covered with timber, of which much is small and scrubby. Spruce and tamarack ranging from 10 to 24 inches in diameter occur in considerable

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Concluded.*

quantities in sections 6, 19, 20, 28, 29, 30, 31, 32 and 33 and are mostly included in a timber berth. Hay is found in more or less abundance along the flat, marshy shore of Washow bay. The chief source of water is Washow bay, the western shore of which cuts through sections 5, 8, 16, 21, 22, 26, 27 and 35. The water, like that of lake Winnipeg, is very hard, containing lime in solution, but nevertheless may be used for domestic purposes. No water-power was found in this township or in the vicinity. The climate is somewhat moist during the summer season, because of the proximity of lake Winnipeg, but at times it is excessively warm. During the winter season severe cold is experienced, sometimes as low as 40° below zero. An abundance of fuel exists in the timber which covers most of the surface, except a strip about 1 mile in width along the marshy shore of Washow bay. No stone-quarries nor minerals of economic value occur. Moose and black bears are common in this district. Very little feathered game of any kind was seen.—*J. W. Tyrrell, D.L.S., 1910.*

76. (*North outline*)—Sections 31, 32 and 33 are high and rolling with burned ridges of spruce and jackpine and a good clay loam soil. The remaining sections are low and flat with occasional muskegs, the soil being a black muck with a subsoil of clay and gravel. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

80. (*North outline*)—This range is situated on the divide between the Burnt-wood and Grass rivers. The country is fairly level with occasional small swamps. The timber is burnt spruce, jackpine and tamarack from 2 to 6 inches in diameter, except in the easterly half of section 32 and the whole of section 33, in which the timber is still green. The soil is black muck with a clay subsoil. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

RANGE 5.

1. This township is well wooded with small timber. A good deal of the best timber has been destroyed by fire. The soil of the southern portion is of very inferior quality and very swampy; that of the northern half is generally of rich sandy loam. Good water can be obtained in any part of the township by digging a few feet.—*A. F. Martin, D.L.S., 1875.*

2. This township is of first-class character, as it consists of rolling prairie. Numerous poplar bluffs with considerable good meadow land are found in the eastern portion. There are boulders throughout the township. The Roseau river flows through the northeastern part.—*J. Grant, D.L.S., 1873.*

3. (*South outline*)—There is some heavy timber in section 2, along the right bank of the Roseau river. The river here is rapid and averages from 1 to 2 feet in depth (month of September); above and below the rapids it becomes suddenly deep. The timber along the river is principally poplar, some of which grows up to 18 inches in diameter. The remaining portion of the township consists of very undulating country; in places it is stony with occasional groves of poplar.—*L. Kennedy, D.L.S., 1872.*

(*Subdivision*)—This township contains a good deal of willow and poplar brush. The timber consists generally of poplar and bluffs of tamarack and spruce. The western

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

branch of Rat creek runs across the northeastern corner of the township, supplying clear and good water. The Roseau river crosses the southwestern corner. On its banks there is a good supply of oak and poplar fit for building purposes. The land in the southern part is high and dry, and well adapted to agricultural purposes. There are large openings in the woods, producing very good grass for hay and pasturage.—J. Grant, D.L.S., 1872.

(*North and west outlines.*)—Along these lines the surface is undulating and

- 4.** covered generally with burnt poplar. There are some scattered clumps of poplar untouched by fire. The soil is of second-class quality.—L. Kennedy, D.L.S., 1871.

(*Subdivision.*)—This township is generally well timbered, and contains very inferior soil. The timber consists generally of poplar and willow. The soil is chiefly sandy, gravelly and stony. Considerable portions are covered with drift, consisting of large granite and limestone boulders. The west branch of Rat creek flows through the southwestern portion, and the east branch across the northeastern corner of the township.—W. Burke, D.L.S., 1872.

This township is generally well timbered, and contains very inferior soil.

- 5.** The timber is principally poplar with a good deal of willow. The soil is chiefly sandy, gravelly and stony. Considerable portions are covered with drift, consisting of large granite and limestone boulders. The eastern branch of Rat river flows across the southwesterly part of the township.—W. Burke, D.L.S., 1872.

- 6.** (*North outline.*)—The poplar has nearly all been burnt along this boundary.—L. Kennedy, D.L.S., 1871.

(*Subdivision.*)—This township contains no timber and is not well adapted to agricultural purposes.—A. W. Lippe, D.L.S., 1872.

This township is chiefly level prairie with a heavy clay soil, and is slightly

- 7.** undulating in sections 17, 19, 20 and 30. There is a considerable tract of wet land which produces, when not too much flooded, an abundance of tall rank grass. There is very little wood in the township, and what there is, is of inferior growth and much damaged by fire; it is composed chiefly of poplar and willow with some tamarack in sections 6 and 8.—T. Cheeseman, D.L.S., 1872.

(*North outline.*)—The country along this line is nearly all a good prairie,

- 8.** with occasional patches of hay land; part of section 36 is in “The Great Marsh.” There is some small poplar and willow in sections 34 and 35. The soil is of first-class quality.—J. Johnston, D.L.S., 1871.

(*Subdivision.*)—The northern part of this township, extending from the north boundary nearly to the road which leads from Winnipeg to Ste. Anne, is either bog or level wet land, broken occasionally by low, dry willow or poplar ridges. In the southwest corner there is also a quantity of low flooded land, which renders 4 or 5 sections unfit for farming. From the west boundary of the township at its intersection with the Winnipeg and Ste. Anne road, there is a belt of good clay loam prairie land running along the north side of the above-mentioned road to the east boundary. To the south of the road there is another belt which runs about one-third of the distance across the township, at which point it widens out and extends to the south boundary of the township.—T. Cheeseman, D.L.S., 1872.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

9. The surface of this township is generally level prairie, interspersed with clumps of poplar, with a fair quantity of low, rich bottom land good for hay, which, with a small amount of drainage, could be made first-class farming land. The Seine river runs through the southern part of the township from east to west. The banks of the river descend abruptly, average about 10 feet in height, and are generally wooded with poplar and small oak. The water is fresh and good, and the soil is a deep, rich loam well mixed with clay.—*E. C. Caddy, D.L.S., 1872.*

(*North outline.*)—The country along this line is prairie with willow brush and a number of tracts of meadow land. The soil is of first-class quality.—*E. Bray, D.L.S., 1872.*

(*Subdivision.*)—A large part of this township is open level prairie, with a considerable portion of hay land which lies principally to the south. There are some groves of poplar timber in the southeastern part of the township. The soil is a deep, rich loam, well mixed with clay.—*E. C. Caddy, D.L.S., 1872.*

This is a first-class township for farming purposes, furnishing fine pasture lands, with soil of the richest quality. About one-sixth of the area of the township is taken up by marshy meadow land, very valuable for its hay. The marshy land has a considerable fall and outlet to the northeast and northwest, the water emptying into Cooks creek. Though springs are numerous, there are no creeks in the township. Strawberries, raspberries, cherries, plums and currents are the principal wild fruits.—*H. Lawe, D.L.S., 1872.*

(*North outline.*)—The surface along this line is nearly all timbered with poplar, some of which is fire-killed. There are a few patches of marsh. The soil is of first-and second-class quality. Cooks creek flows in a northerly direction through section 35.—*B. Magrath, D.L.S., 1871.*

(*Subdivision.*)—The soil is of first-class quality, excepting in the centre of the township, where it is inferior. The timber consists of large poplar, from 12 to 18 inches in diameter, and spruce and tamarack in the swamps of similar dimensions.—*D. Sadler, D.L.S., 1872.*

This township is well adapted to cultivation. Though there are numerous swamps, they are neither deep nor large in extent. The prevailing timber is poplar, and it is not of any great size, except along the banks of Cooks creek. A large part of the township is covered with scrub. The creek is supplied by springs along its course, and is consequently never dry in summer or much frozen in winter. The water is pure and good. Large quantities of hay are cut from the swamp land each year.—*G. A. Bayne, D.L.S., 1872.*

This township is well adapted to agriculture. Sections 25 and 36 are heavily timbered with poplar. There are a few swamps but they are not very large. Sections 24, 13, 12 and 1 are on a high ridge, and are generally covered with low scrub. The soil is good. Water can be obtained by sinking wells to no great depth.—*G. A. Bayne, D.L.S., 1872.*

This fractional township consists only of the two northern tiers of sections, the balance being within the limits of St. Peter's Indian reserve. Sections 28, 29, 31, 32, and 33 lie almost entirely within a lake. The remaining sections are only from 6 to 12 feet above the level of lake Winnipeg. The land is generally

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Concluded.*

wet, with an exceedingly rich soil and a luxuriant growth of hay, interspersed with sloughs and deep marshes. Along Devil creek there is some oak and elm timber. There is here a narrow belt of land that might not be too wet for cultivation, but the area of it is very small. It is well adapted for stock-raising. Red river flows through sections 28 and 34.—*R. C. McPhillips, D.L.S., 1888.*

16. None of this township fit for cultivation, and only a small portion near the banks of the river and creeks is dry enough for hay land. The rest is deep marsh, with reeds and rushes.—*R. C. McPhillips, D. L. S., 1888.*

23. This township comprises the southwesterly portion of Hecla island. The greater portion is slightly rolling land, covered with poplar, birch, spruce and tamarack. The western and southwestern portions extending about a half mile inland, are sawmpy with scattered bluffs of willow and reeds. There are a few settlers in the township, some of whom have considerable improvements. There is an abundance of hay in the marshes.—*R. C. McPhillips, D.L.S., 1887.*

24. In the immediate vicinity of the western shore of Hecla island within the limits of this township the shore is very low and marshy for a mile or so back from the lake; the swamp or marsh is covered with a growth of tamarack. Back of this the surface is rolling, and timbered with poplar, spruce and birch. On the mainland the land is low and marshy, and timbered with small spruce and tamarack. Along the shore it is marsh, with reeds and rushes. The township does not offer any attractions for settlement, either for tillage or stock-raising.—*W. Wagner, D.L.S., 1883.*

25. The portion we surveyed in this township is the westerly part of Goose island, which lies between the northern end of Hecla island and the west shore of lake Winnipeg. With the exception of a settler's cultivated land and a small extent of hay land, the surface is covered with clumps of poplar and willow. The central portion has an elevation of about 6 feet above ordinary high water.—*R. C. McPhillips, D.L.S., 1887.*

(*North outline.*)—In sections 31 and 32 the country is low, flat and swampy, but in sections 33, 34, 35 and 36 it is more rolling and drier. In the easterly half of section 35 the Nelson river is crossed. The banks here are of clay and about 70 feet high, and the current is from 3 to 4 miles per hour. The timber, consisting of spruce, jack pine and tamarack, from 2 to 7 inches in diameter, has all been burned, some of it as recently as the summer of 1913. The soil is black and clay loam. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

(*North outline.*)—The country in this range is swampy, with occasional jack pine ridges and could be drained into Witchai lake. In the westerly half of section 32 a trial line of the Hudson Bay railway on the route to Churchill is crossed. The soil in this range is black and clay loam, and the timber is mostly burned. For information as to minerals, game and climate, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 6.

This township is unfit for farming purposes owing to its being low and wet.

- 1.** The greater part of the surface is covered with willows, and a few fair-sized poplar.—*A. F. Martin, D.L.S., 1875.*

This township is mostly high land, and is generally prairie interspersed with

- 2.** fine groves of poplar timber. The soil, is a dark loam, but is somewhat lighter on the ridges. The Roseau river, a fine stream of good clear water, fringed with a narrow belt of elm, oak and poplar of good size, flows through the township. The whole of this township is adapted to farming. There is rich soil on the prairie, and a sufficient supply of timber for fuel and building purposes.—*J. Grant, D.L.S., 1873.*

(*East outline.*)—The country along this line is open, very low, and abounding

- 3.** with groves of tamarack. The drainage of this region is by Rat river, which crosses the northeast corner of the township. This stream has clear water, a gravelly bottom and clay banks, averaging from 5 to 10 feet in height. Wild hops, which are very large, grow along the banks. To the south of the river the country merges into an extensive muskeg, on which grows a luxuriant growth of grass.—*L. Kennedy, D.L.S., 1872.*

(*South outline.*)—Sections 1 and 2 are low and marshy; the remaining four sections are table-land, abounding with ridges, which are generally very stony and covered in many instances with scrub willow and poplar.—*L. Kennedy, D.L.S., 1872.*

(*Subdivision.*)—This township is generally low and level. The southern part is wet and has a heavy clay soil, producing grass suitable for pasturage. The northern part is fairly well wooded with tamarack and spruce; and there are large openings in the woods, affording fine hay and pasturage. There is a good deal of gravel in the soil. The west branch of the Rat river which flows across the northeast corner of the township contains good, clear water. The bed of the stream is gravelly, and its banks are skirted with willow brush.—*J. Grant, D.L.S., 1873.*

(*North outline.*)—The country along this line has an undulating surface,

- 4.** and is timbered with poplar, spruce, tamarack, willows and a few scattered elms. There are a few prairie openings, The soil is of second-class quality.—*L. Kennedy, D.L.S., 1871.*

(*East outline.*)—Along this boundary the soil is generally light. The surface is covered for the greater part with timber consisting of poplar, tamarack and willow. There is a luxuriant growth of grass, even in the timbered portions. Water is readily obtained by digging from 3 to 11 feet. The timber has mostly been killed by fire, and is now being replaced by a growth of young poplar.—*L. Kennedy, D.L.S., 1872.*

(*Subdivision.*)—The two northern tiers of sections are well wooded with tamarack, spruce and poplar. The soil is chiefly a light clay loam, excepting in the southwestern part, where it is stony and gravelly and chiefly covered with dead poplar and willow. The west branch of Rat river runs diagonally across the township. On both sides of this stream there are some fine bottom lands, part of which are well wooded with poplar.—*J. Grant, D.L.S., 1872.*

(*East outline.*)—Along this line the country is undulating and generally

- 5.** covered with timber, consisting of oak, ash, elm, poplar, spruce, tamarack and willow. There are occasional prairie openings. The soil is of second-class quality.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—Owing to its level surface this township is totally unfit for farming purposes, the land alternating from a marsh to a coarse, sandy, stony soil. In a

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

few places good trees can be found large enough to be used in the construction of buildings. In general the timber consists of aspen, elm, spruce and tamarack. Water of good quality can readily be found all over the township, either on the surface or by digging.—*J. B. Richard, D.L.S., 1872.*

(*North and east outlines.*)—These lines run through an undulating prairie

- 6.** with bluffs of poplar and patches of willow, both of which are nearly all killed by fire. The soil is of first-class quality, although it is stony with a number of boulders in places.—*L. Kennedy, D.L.S., 1871.*

(*Subdivision.*)—This township is nearly all bush. At one time it was heavily timbered with large poplar, but the only large timber which has escaped the fire consists of groves of tamarack which are suitable for building purposes. The principal part of the bush is small poplar with willow underbrush. The land is of poor quality with a rolling surface. The western tier of sections is covered with large boulders, and in its present state is quite unfit for settlement. The soil is light and generally mixed with sand and gravel.—*D. Sadler, D.L.S., 1872.*

(*East outline.*)—The country along this line is an undulating prairie with

- 7.** willow scrub and occasional clumps of poplar and tamarack. There are some small hay swamps here and there. The soil is of first-class quality.—*J. Johnston, D.L.S., 1872.*

(*Subdivision.*)—The two northern tiers of sections of this township are chiefly level prairie. The southern part is undulating and intersected by gullies or ravines which effectually drain it of all surface water. The beds of these gullies, when drained off in summer produce heavy crops of hay of excellent quality. The soil is a deep clay loam, easily worked and well adapted to agricultural purposes. The timber is chiefly young poplar of vigorous growth, though as is frequently the case, it has been injured by fire. On parts of sections 4, 8, 11 and 14 there is some tamarack of good size.—*T. Cheeseman, D.L.S., 1872.*

(*North outline.*)—Sections 35 and 36 are open prairie with a first-class

- 8.** soil; the remaining sections are within “The Great Marsh.”—*J. Johnston, D.L.S., 1871.*

(*Subdivision.*)—About one-third of this township is included within the parish of Ste. Anne. The portion subdivided is level prairie with a deep clay loam soil. The only woods are a few small bluffs of poplar and willow. The northern part of the township is nearly all composed of marsh, which is of little value in its present state. The river Seine enters the township near the centre of the eastern boundary, flows across the township, and leaves in section 31. The river averages about 65 feet in width and from 8 to 10 feet in depth. The current is hardly perceptible in places.—*T. Cheeseman, D.L.S., 1872.*

(*East outline.*)—The line passes through an open prairie, with an occasional

- 9.** bluff of poplar. There are many marshy tracts. The soil is of first-class quality.—*J. Johnston, D.L.S., 1871.*

(*Subdivision.*)—This township is chiefly level prairie, with a large area of hay land in the southern part. On the southern side of the Seine river there is a large marsh, totally unfit for cultivation, a part of which could not be surveyed. The Seine river runs through the southwesterly corner of the township, the water in which is fresh and good. The soil is generally a rich deep clay loam.—*E. C. Caddy, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

(*North outline.*)—The country along this line is good prairie land with occasional hay meadows. Cooks creek flows in a northerly direction through section 33. The soil is of first-class quality.—*E. Bray, D.L.S., 1872.*

(*East outline.*)—Along this line the land is rather swampy in places. There are many bluffs of poplar. The land is second-class quality.—*J. Johnston, D.L.S., 1871.*

(*Subdivision.*)—The surface of this township is generally low and level and contains a large area of hay land, which by draining might be made suitable for agricultural purposes. The soil is for the most part deep, rich clay loam. There is scarcely any wood with the exception of some groves of poplar in the northwest corner which have been overrun by fire some years ago. There are many ridges in this part of the township, and the soil is in some places of a gravelly nature.—*E. C. Caddy, D.L.S., 1872.*

(*South and east outlines.*)—The country along these lines is nearly all prairie.

11. It was formerly wooded throughout with poplar, which has been burnt. Some of the dead timber is still standing. The land is wet and gravelly in places, and is generally of third-class quality.—*E. Bray, D.L.S., 1872.*

(*Subdivision.*)—The soil is a rich clay loam in the westerly two-thirds. The easterly third has a gravelly loam on the top of the ridges, and a rich loam in the valleys. One-sixth of the area is taken up by marshy meadow lands most of which is unfit for cultivation in its present state, but is valuable for the hay which it produces. The largest portion of this marshy land lies on the western side, and appears to be a good deal higher than the bottom of Cooks creek, into which it drains; most of it could be drained at very little cost. Several sections are timbered with poplar. Water can be found by digging to no great depth.—*H. Lawe, D.L.S., 1872.*

(*North outline.*)—Along this line the surface is rolling and covered with poplar woods and many tracts of marsh. The land is stony in a number of places. The soil is of second-class quality. Cooks creek flows in a northerly direction through section 36.—*B. Magrath, D. L. S., 1871.*

(*East outline.*)—The country along this line is nearly all timbered with poplar. There are many marshy tracts. The land is of second-class quality. Cooks creek flows in a northerly direction through section 1.—*E. Bray, D.L.S., 1872.*

(*Subdivision.*)—The surface of this township is rolling and traversed by numerous ridges and marshes mostly bearing northwest and southeast. Some of the marshes are very extensive and miry, though very valuable for hay. Nearly half of the township is covered by poplar bush. There are several small creeks in the township, one of which, Cooks creek (a spring creek) furnishes water during the whole year.—*H. Lawe, D.L.S., 1872.*

13. (*East outline.*)—The land along this line is rather low and marshy, and timbered with bluffs of poplar, spruce and tamarack.—*B. Magrath, D.L.S., 1871.*

(*Subdivision.*)—This township is not well adapted for agriculture, excepting in sections 19 and 30. The swamps are large, numerous, and impassable, except in mid-summer and the winter season, but they might easily be drained at a comparatively small outlay. The remaining portions of the township are heavily wooded with poplar and a few scattered oak and spruce. The soil, however, along the banks of Devil creek, is good as is shown by the heavy growth of underbrush amongst the poplars. Fires have, at some former time, ran over the principal part of the township, leaving extensive and heavy windfalls.—*G. A. Bayne, D.L.S., 1872.*

(*Partial.*)—The greater part of the east half of this township has been settled. The west half is overgrown with a dense growth of poplar, willow and scrub.—*C. F. Aylsworth, D.L.S., 1901.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

(*North and east outlines.*)—The surface of the country along these lines is

- 14.** generally low and wet, with alternate belts of poplar, spruce and balsam, and marsh. A considerable portion of the timber has been burnt and blown down. Devil creek flows in a northerly direction through section 32, and a small creek through section 24. The soil is of good quality, but owing to the land being wet it is not a desirable locality for settlement in its present state.—*B. Magrath, D.L.S., 1871.*

(*Subdivision.*)—This township is traversed by numerous trails, which are used for lumbering purposes. The best of the timber has been cut off, though there are still considerable quantities fit for building and fencing purposes. Were a channel cut through the swamps to Devil creek, it would, by draining them, make good farming land, the soil being dark loam and very deep.—*G. A. Bayne, D.L.S., 1872.*

This is one of the most favourable townships in this section of the country

- 15.** for the purpose of settlement; the land throughout is rolling, and covered for the most part with poplar, spruce and tamarack of the best quality. There is also some good ash and oak. It is also dotted with numerous small, good hay marshes. The soil is a good black loam, with a sub-stratum of white clay.—*J. Johnston, D.L.S., 1874.*

The northerly two-thirds of the township lies in an extensive marsh, inter-

- 16.** sected with numerous deep sloughs and open ponds. There are a few ridges of land sufficiently dry to produce an excellent growth of hay. The southerly third of the township is timbered with large oak, elm, poplar, and a small quantity of spruce and tamarack, all of the best quality. The land is undulating and the soil is a black loam, with a subsoil of white clay and sand.—*J. Johnston, D.L.S., 1874.*

(*Partial.*)—No dry land was found in sections 23, 15 or 22. The only comparatively dry land was on the edge of a creek on the east side of section 22. It seems peculiar to find a creek in a lake such as Pruden bay, but this is the fact here. This creek seems to be a channel in Pruden bay with the excavated material deposited on either side, but when the wind blows from the north, the above sections are completely under water. Pruden bay is about 3 feet deep and about half of its area is covered with clumps of tall reeds. The drowned land, extending from the east side of Pruden bay westerly to the Red river, is the hatching ground for swarms of wild ducks. The Indians on the Brokenhead Indian reserve live by fishing in Lake Winnipeg and Brokenhead river, shooting ducks on Pruden bay, and deer, moose and elk in the country to the east. The Indians have made comparatively no improvements on their reserve, except that a few have small patches of potatoes. Their houses are the usual Indian shacks. The Canadian Northern railway have graded a line from Winnipeg passing between East Selkirk and Selkirk, through Libau and the Brokenhead Indian reserve and thence westerly to Poplar Park, but the rails have not yet been laid. It has the appearance of being an exceptionally well constructed line and the ditches made for the grade have very materially drained the adjoining country. The travelled road leading from Selkirk here has been very much improved since last summer, especially for some distance south of Devil creek northerly towards the reserve. The water in Pruden bay and the surrounding marshes was not quite as high as it was last July. The Indians said that a strong gale from the north turned Pruden bay into a lake, thus proving that dry weather does not affect the depth of the water over these flats, but the depth depends entirely upon the wind.—*C. F. Aylsworth, D.L.S., 1913.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

This fractional township is situated in the southeastern part of Hecla

- 23.** island. It is covered with spruce, tamarack, poplar and birch timber. There is but little marsh within the limits of the township.—*R. C. McPhillips, D.L.S., 1887.*

This township is situated on Hecla island. It is almost entirely covered

- 24.** with timber, consisting of principally poplar, spruce, tamarack, birch and balsam, the poplar and birch being near the lake-shore. The interior of the island is principally swamps, and is covered with a growth of spruce and tamarack. Without a system of drainage, the only part of this township at present suitable for settlement is along the lake-shore. There are a number of settlers in the township.—*R. C. McPhillips, D.L.S., 1888.*

This township is thickly timbered with spruce, tamarack and a few poplar

- 25.** and birch. The surface is too wet for tillage, and, being destitute of meadows, is useless for stock-raising purposes. The swamps on the western shore of the island are too wet and the grass too rank to be of any use for cattle. There is some splendid limestone suitable for building purposes; and, being near the lake shore, it might easily be loaded on barges for shipment.—*W. Wagner, D.L.S., 1883.*

The north end of Hecla island in lake Winnipeg is almost wholly within the boundaries of this township, only a small portion extending easterly into sections 19, 30 and 31, township 25, range 7. When this township was originally surveyed it was covered with a heavy growth of green timber for a distance of a quarter to a half mile inland from the shore of lake Winnipeg, but since that time it has been fire-swept. The land is high and dry and consists principally of a surface of sandy loam and stone, under which at a depth varying from 1 to 6 feet is the stratified shale limestone rock. Inland from this shore-strip it is low tamarack and spruce muskeg which, after the timber is removed, is now and always will be valueless. The settlers, all of whom are located on the high land, are Icelanders. At present they do not work much on the land as their present means of livelihood is fishing in the winter. Although they have cleared small patches of land and keep a few cows and sheep, their time is principally occupied in the summer with catching fish to feed their many sleigh dogs. What little soil there is, is fertile and productive. A company has a large gang of men and its quarry equipped with good machinery, and is shipping limestone by barges from the east side of section 27 to Winnipeg. While we were in the township, other parties had placed notices that they were acquiring the land with the intention of operating a building-stone quarry on the east side of sections 13 and 24. The attractions of Gull Harbour as a summer resort are becoming more popular each year and more people are going there, who together with the new Dominion fish hatchery provide a market for the produce that these settlers can raise. Years ago, some Icelanders settled in sections 20 and 29, but their improvements and their school are now abandoned. All the merchantable timber along the shore has been removed. On the interior of this portion of the island a few valuable spruce and poplar and great quantities of small tamarack and spruce suitable for fence posts still stand. There is no wild hay. The water that the settlers now use is not of good quality, but by drilling excellent water may be had. There are no streams. The climate is well suited for raising any of the western varieties of grain and in addition the soil and climate are suitable to produce the hardier varieties of fruits as there is an abundance of mountain-ash and a great profusion of wild raspberries. There are a few moose and deer on the island. The only means of reaching this island is by steamer from Selkirk.—*C. F. Aylsworth, D.L.S., 1912.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

. RANGE 6.—*Concluded.*

- (*North outline*).—Across this range the line passes through a low, rolling, moss-covered country with numerous wet, swampy valleys. The timber consists of green spruce from 2 to 6 inches in diameter with occasional clumps of tamarack. The soil is black muck with a subsoil of clay and clay loam. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

- (*North outline*).—Sections 31, 32 and 33 and the westerly half of section 34 of this range show a continuation of the low swampy ground, timbered with burned spruce, tamarack and jackpine, such as was found in the range to the west. In the easterly half of section 34 and in section 35 the timber is green spruce and tamarack. The soil is black loam and clay and the swamps could be easily drained into the Nelson river, which is crossed in the westerly half of section 36. Here the banks of the Nelson river are about 80 feet high. On the west side they are rock, and on the east side boulder clay. The current is about 5 miles per hour. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

RANGE 7.

- This township is useless for agricultural purposes without thorough drainage, three-fourths being covered with either water, floating bog or swamp with willows. The few dry spots are stony and strewn with large boulders, and are the only parts on which the timber (poplar) grows to any size. This township could be easily drained into Roseau river, which flows through it.—*A. F. Martin, D.L.S., 1875.*

- The greater portion of this township is covered with swamps, in which long marsh willows, reeds, sedge grass and rushes predominate. The only sections at all fit for settlement are the western tier, which are wooded with poplar. The Roseau river flows through the middle of the township.—*A. F. Martin, D.L.S., 1875.*

- (*West outline*).—Along the western boundary the land is low and abounding with groves of tamarack. The drainage of this region is by Rat river, which flows through this township in a westerly direction. This stream has clear water, a gravelly bottom and clay banks averaging 10 feet in height. Towards the centre of the township the land is more elevated, and covered with groves of poplar. Wild hops of a very large size grow in abundance along the banks of Rat river. The soil is of third-class quality.—*L. Kennedy, D.L.S., 1872.*

- (*Subdivision*).—The land in this township is unfit for agricultural purposes, being of inferior quality with many bogs and swamps. The timber on the dry land is poplar and willow, of little value except for fuel. In some places there are boulders of various sizes.—*J. Grant, D.L.S., 1875.*

- (*North outline*).—The land traversed by this line is rather low and swampy, and timbered with spruce, tamarack and poplar; the trees are from 3 to 18 inches in diameter.—*L. Kennedy, D.L.S., 1873.*

- (*Subdivision*).—The soil in this township is poor, shallow and sandy, with frequent marshes, and is unfit for farming. There is considerable good poplar, and tamarack and Norway pine.—*J. Grant, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 7.—*Continued.*

5. The soil in this township is light and the timber small. Only about one-third of it is suitable for immediate settlement.—*D. Sinclair, D.L.S., 1874.*

(*North outline*).—Sections 31, 32 and 33 are undulating prairie with occasional bluffs of poplar and willow brush, the greater part of which has been killed by fire. The soil is of first-class quality. The surface of the remaining sections is generally level and marshy, and in many places there is a growth of tamarack and willows. The land is of second and third-class quality.—*L. Kennedy, D.L.S., 1872.*

(*Subdivision*).—The soil of this township generally is light. The timber, consisting of bluffs of small poplar and occasional bluffs of tamarack, has mostly been killed by fire.—*D. Sinclair, D.L.S., 1874.*

All the eastern part of this township is covered by a very bad marsh 2 miles **7.** in width. The soil of the remainder of the township is of second-class quality, excepting 2 miles of the westerly part, which is first-class. The Seine river traverses the township from south to north, furnishing an abundance of good water, and is generally wooded on both sides; in some places building timber is found.—*A. F. Martin, D.L.S., 1872.*

(*North outline*).—Sections 31 and 32 are open prairie with a small belt of **8.** poplar. The remaining sections are mostly timbered with poplar. There is an open muskeg in section 35. There are a number of small creeks draining the township. The soil is a sandy loam of good quality.—*J. Johnston, D.L.S., 1871.*

(*Subdivision*).—The westerly part comprises part of the parish of Ste. Anne. The remainder of the township is wooded with poplar, spruce and willow. The northern part contains building timber; elsewhere the timber is fit for firewood only. The Dawson road crosses this township. The soil is generally sandy. The southeasterly part of the township is marshy.—*A. F. Martin, D.L.S., 1872.*

The soil and timber in the easterly part are of inferior quality. The westerly **9.** part is well adapted to settlement, and the timber and the water are of good quality. A branch of Cook's creek flows across the north-eastern part of the township.—*A. H. Vaughan, D.L.S., 1872.*

The soil in this township is all first-class for farming purposes, as it consists of black or sandy loam with a clay subsoil. Every quarter-section might be classified as first-class with the exception of three or four which are broken by muskegs. The surface is mostly level or undulating, nearly all of it being covered with thick second-growth poplar, willow and hazel scrub, and in places poplar bluffs. All along the west boundary it is open level prairie. Whatever timber there is, is situated in the north-eastern part of the township. However, timber for building purposes and wood can be had a few miles to the east. There is very little hay to be had in the township although there is plenty of good pasture, and a few hay sloughs. Hay in large quantities can be had a few miles to the west. Water of good quality can be had by digging about twelve feet. There are no streams or creeks in the township, but in summer the sloughs contain enough water for stock and the wells supply enough in the winter. The climate is temperate, having no summer frosts. There are no water powers, coal or lignite veins, stone-quarries or minerals to be found. Enough stone can be procured, however, for building purposes. Game is plentiful a few miles to the east, consisting of moose, deer and black bears. Prairie-chickens and partridges are found in the township. There are two schools in the township and two more within

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 7.—*Continued.*

a few miles, besides post offices and small country stores. The country is well travelled, with good trails going to all parts. Ste. Anne, a village of about 600 inhabitants, is situated on the Canadian Northern railway, about 6 miles to the south.—*J. Molloy, D.L.S., 1904.*

10. (*North outline.*)—Along this line there are some spruce and tamarack woods alternating with poplar with a dense bottom growth of willow and hazel. There are several tracts of marsh on some of which there is a growth of willows. The land is of second-class quality.—*E. Bray, D.L.S., 1872.*

(*Subdivision.*)—The western part is well adapted to settlement. The timber being so near the adjoining prairie, makes the wooded sections very valuable. The principal kinds of timber are spruce, juniper and poplar. The surface of the township is undulating, and water in all the brooks is good.—*G. A. Bayne, D.L.S., 1872.*

11. The surface of this township consists of rolling prairie, broken by numerous swamps and gullies. In sections 7 and 8 are a few clumps of small poplar and willows, from 2 to 4 inches in diameter. In September, 1872, most of the swamps and marshes were dry. Water can easily be obtained by digging a few feet. The soil is sandy, gravelly and yellow loam, averaging in depth from 3 to 8 inches; it is chiefly second-class, with some first-class.—*G. A. Bayne, D.L.S., 1873.*

12. (*North outline.*)—The country along this line is alternately poplar or spruce woods and marsh or meadow land. The soil is of second-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie. There are a few marshes which contain good fresh water. The soil is first-class, and consists of clay loam mixed with gravel in some places.—*G. A. Bayne, D.L.S., 1873.*

The land in this township has all been patented and is now owned either by private individuals or by real estate companies. There are a great many large hay meadows where large quantities of hay are cut annually. Many large muskegs were found. The timber has almost all been cut.—*C. F. Aylsworth, D.L.S., 1901.*

13. The easterly part is meadow land; the westerly portion is heavily timbered with poplar, spruce, and some oak and elm. Most of the land is suitable for settlement.—*J. Johnston, D.L.S., 1872..*

(*Partial.*)—The area surveyed in this township is nearly all either muskeg or hay meadow, and in order to make this land suitable for settlement it is proposed by the council of the municipality of Brokenhead, in which this land is situated, to construct graded roads for the purpose of travel and drainage. A number of these roads are now under process of construction.—*C. F. Aylsworth, D.L.S., 1901.*

14. The surface of this township is alternately covered with poplar and red pine woods. There are a number of scattered swamps, covered with a growth of small spruce and tamarack. The timber in places has been burnt; where this occurs a new growth is springing up. The soil is of second-class quality.—*J. Johnston, D.L.S., 1873.*

The greater portion of the west part of this township is rolling red sand and jackpine ridges while the remainder is poplar bush, tamarack swamp and sloughs. The soil in the tamarack swamps is generally of a quicksand nature. Most of the merchantable timber has been removed to market via Tyndall on the main line of the

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 7.—*Continued.*

Canadian Pacific railway. Many old lumber roads are to be found, also the almost decomposed remains of the old lumber camps. An old lumber trail was found throughout the length of the west boundary of the township. These are only winter roads and are impassable in the summer time.—*C. F. Aylsworth, D.L.S., 1907.*

The soil is generally of an inferior quality, being sandy and swampy, with

- 15.** burnt woods, except along Brokenhead river, which flows through the north-easterly part of the township. Here the land is of excellent quality, and is thickly wooded with fine oak, pine, poplar and ash.—*J. Johnston, D.L.S., 1874.*

There are a few settlers immediately west of the portion of this township which I surveyed, but only a few, for the western portion of the township is nearly all muskeg.—*C. F. Aylsworth, D.L.S., 1906.*

The greater portion of this township for 2 miles south of the Indian reserve is a floating tamarack muskeg, and the greater portion of the balance is rolling jackpine, sand and gravel ridges.—*C. F. Aylsworth, D.L.S., 1907.*

This township for the greater part, consists of an elevated sandy ridge running

- 16.** from north to south, wooded with timber of small size and dense brush. The southwestern part of the township forms part of Brokenhead Indian reserve.—*J. Johnston, D.L.S., 1874.*

The eastern portion of the area surveyed consists of jackpine, sand and gravel ridges; the western portion consists of tamarack, spruce and a few scattered scrubby muskegs. Portions of these muskegs may be reclaimed for agricultural purposes in future, as the water seems to flow rapidly towards lake Winnipeg.—*C. F. Aylsworth, D.L.S., 1908.*

This township lies on the east shore of lake Winnipeg, and with the exception

- 17.** of the land along the shore of the lake is generally swampy and covered with spruce and tamarack.—*J. Johnston, D.L.S., 1874.*

This township is wooded throughout and has a gently rolling surface.

- 18.** There are extensive tracts of low, swampy land, where spruce and tamarack timber predominate, and others where large poplar predominates, but with a large proportion of spruce of fair quality up to 20 inches in diameter. The soil in the greater part of the township is clay loam, in many places inclining to sandy loam; much of it is very good. Where the land is covered with red pine exclusively, as in parts of sections 2, 3, 10, 21, 24, 25, 26, 28, 33, 35 and 36, the soil is sand, and is useless for farming purposes. However, a large proportion of the township has a soil of very good quality. There are a few settlers in sections 18 and 19.—*J. Doupe, D.L.S., 1885.*

This townships is wooded throughout, about one-third being spruce and

- 19.** tamarack swamp. Another third of the area may be classed as good to fair soil which is covered with poplar mixed with spruce, tamarack, birch and some balsam. The remaining third consists of sandy ridges covered with jackpine, with in some places a mixture of poplar and birch. The poplar, spruce and tamarack attain a diameter of 20 inches. The pine is generally small, seldom reaching 12 inches in diameter.—*J. Doupe, D.L.S., 1885.*

This township embraces a point of land which, during the normal state of

- 20.** lake Winnipeg, is a peninsula, but with a strong north wind, becomes for the time an island, known as Little Elk island. The connection with the mainland is merely a low sand bar from 1 to 3 chains wide. The soil is mostly light clay

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 7.—*Concluded.*

loam, inclining to sand and is covered with poplar, intermixed with birch and some Banksian pine around the north shore of the island, while along the west and south spruce and poplar appear.—*J. Doupe, D.L.S., 1885.*

76. (*North outline.*)—This line runs through a low, slightly undulating country with muskeg valleys of considerable extent. The timber for the most part is small green spruce and tamarack, burnt over only in patches. The soil is black muck with a subsoil of clay and gravel. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

80. (*North outline.*)—The line in this range runs parallel to a lagoon opening off the Nelson river, and crosses extensions of the lagoon in sections 32 and 35. This lagoon is approximately $5\frac{1}{2}$ miles long and varies in width from half a mile to a mile and a half. It is shallow but varies considerably in depth as the Nelson river rises and falls. A creek of good size flows into the easterly end of it. In the easterly half of section 36, a Hudson Bay railway trial line is crossed. Through sections 31, 32 and 33 the timber is very dense green spruce from 2 to 6 inches in diameter, but in sections 34, 35 and 36 it is burned spruce and jackpine from 4 to 10 inches in diameter. The soil is principally clay loam and gravel, with black muck and clay subsoil in the valleys. The country is rolling with swampy valleys which can be quite easily drained into the lagoon. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—*B. W. Waugh, D.L.S., 1913.*

RANGE 8.

1. (*South outline.*)—The Roseau river flows in a northwesterly direction through section 6. Along the banks of this stream there is some timber, consisting of oak, elm and black ash with thick underbrush. Away from the river, the country is generally timbered with belts of poplar and spruce, poplar and pitch-pine, and spruce and tamarack, much of which has been destroyed by fire. The land is of second- and third-class quality.—*W. Pearce, D.L.S., 1877.*

(*Subdivision.*)—The Roseau river crosses this township in a northwesterly direction through sections 6 and 7. The west half of this township is first-class, the soil being a black loam 3 inches in depth with a clay subsoil. The east half is second-class. The soil is clay, stone and gravel. Dry and green poplar may be found all over the township, although some has been used by the surrounding settlers. First-class hay meadows are also plentiful, offering a splendid opportunity for intending settlers who would like to go in for mixed farming.—*J. A. Coté, D.L.S., 1901.*

2. (*North and east outline.*)—The east boundary of this township is swamp and is covered with small dry tamarack killed by fire. The soil along the north boundary is first-class and is covered with dry poplar, willows and brush, and large hay marshes with scrub. All of this township is high land and is suitable for stock-raising.—*J. A. Coté, D.L.S., 1902.*

(*Subdivision.*)—The soil throughout this township is third-class. The southwest corner is principally muskeg with tamarack and poplar bluffs. The southeast corner is muskeg with poplar and spruce bluffs, and the north half is about the same. The central portion is somewhat rolling. There are not any settlers. There are no streams of water in the township.—*C. F. Aylsworth, D.L.S., 1902.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Continued.*

3. (*East outline.*)—Along this line the country is nearly all swamp and is timbered with spruce and tamarack, and occasionally with cedar; much of the timber, however, is fallen. Rat river flows in a northwesterly direction through section 13.—*L. Kennedy, D.L.S., 1873.*

(*South outline.*)—There is considerable grass land along this boundary with bluffs of poplar and willow. The land is of second- and third-class quality.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—The east two-thirds of the portion of this township to the north of Rat river is covered with tamarack, spruce, jackpine, poplar and birch, with a few cedar bluffs and muskegs. The remainder of the part to the north of the river is largely occupied by willow flats. South of the river the country is covered with bush with a considerable area of fine hay meadow land. The water of Rat river is clear and good. It is possible that in the spring this stream overflows its banks, especially on the south side. There are no settlers in this township as yet.—*C. F. Aylsworth, D.L.S., 1902.*

4. (*North and east outlines.*)—The country traversed by these lines is mostly swamp, and is timbered with spruce, tamarack, cedar, balsam and pine. The trees vary up to 20 inches in diameter. The soil is of third-class quality.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—This township is generally timbered with spruce, tamarack, poplar and cedar. There are a number of marshy tracts. The soil is of second- and third-class quality.—*L. P. de Courval, D.L.S., 1884.*

5. (*East outline.*)—The country along this line is nearly all swamp land with occasional dry ridges, which are timbered with spruce, tamarack, cedar, and balsam and Norway pine; the timber varies from 3 to 24 inches in diameter. The surface is strewn in many places with granite boulders. The land is of third-class quality.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—About one-third of the township is swampy. The soil is generally light and sandy. There is a large quantity of timber consisting of cypress, pitchpine, spruce and tamarack, fit for building purposes, and some excellent cedar in the eastern part of the township.—*D. Sinclair, D.L.S., 1874.*

6. (*North outline.*)—The country along this line is generally timbered. There are a few openings and an occasional tamarack or cedar swamp. On the dry land the timber is poplar and spruce. The Seine river flows in a northerly direction, through section 31. Along the banks of this stream there is some scrub oak, elm, ash, cherry and balm of Gilead.—*L. Kennedy, D.L.S., 1872.*

(*East outline.*)—There is a very small percentage of swamp along this boundary. The surface is strewn with large granite boulders, and timbered with oak, elm, poplar, spruce, tamarack, Norway pine, cedar and balsam, some of the trees running up to 24 inches in diameter.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—This township is nearly all timbered with a second growth of small pine, tamarack and poplar. In the northeastern part there are some groves of spruce and tamarack fit for lumber. The soil is mostly light, dry and sandy. There are a number of swamps throughout the township. The Seine river, which flows through the township, is large enough to carry down the timber if it were cleared of brush.—*D. Sinclair, D.L.S., 1874.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Continued.*

(*East outline.*)—The surface is undulating and generally timbered with

- 7.** Norway pine, spruce, tamarack and a few cedars. There are some tracts of marshy land. The soil is of second-class quality.—*J. Johnston, D.L.S., 1872.*

(*Subdivision.*)—The whole township is almost unfit for settlement in its present state, being composed of swamps and stony land, but is well wooded.—*A. F. Martin, D.L.S., 1872.*

(*North outline.*)—The country along this line is timbered with poplar, black

- 8.** oak, spruce, tamarack and willows. There is an open muskeg in section 33. The land is of second-class quality.—*J. Johnston, D.L.S., 1871.*

(*East outline.*)—This boundary runs through undulating land. The surface is timbered with small poplar, white birch, spruce, tamarack, and a few cedars. The soil is of second-class quality. The Dawson road passes through section 13, where there is some first-class land along a creek.—*J. Johnston, D.L.S., 1872.*

(*Subdivision.*)—Though wooded this township has but little timber suitable for building purposes, excepting in sections 18 and 19, which contain some groves of good spruce. The land is hardly suitable for agricultural purposes, in its present state, it being either swampy or sandy. The Dawson road crosses this township.—*A. F. Martin, D.L.S., 1873.*

(*East outline.*)—About one-half of the land along this boundary is low and

- 9.** marshy and covered with tamarack, spruce and cedar; the drier portion is timbered with poplar, elm, black ash and white birch. The land is of second-class quality. A branch of Brokenhead river runs northeasterly through section 24.—*J. Johnston, D.L.S., 1871-2.*

(*Subdivision.*)—The soil and timber are of an inferior quality, the timber being generally small, and the land swampy and sandy.—*A. H. Vaughan, D.L.S., 1872.*

About one-third of this township is unfit for settlement, being a floating bog covered with bluffs of tamarack and spruce, along the north and east boundaries. The remaining part is nearly all second-class land; the soil is principally a sandy loam with clay subsoil. The surface is mostly covered with spruce, poplar, tamarack and second-growth poplar and willows, being about equally divided throughout the township; the timber averages about 8 inches in diameter. The surface is level or undulating. Hay can be had in large quantities in the hay sloughs and in marshes along the edges of muskegs. The greater part of the muskeg is almost impassable without poles to assist in getting over the open parts, where there is no sod to keep one from sinking through. Brokenhead river leaves the township on the north boundary of section 36; at this place it is about 20 feet wide and 8 feet deep at times, but south of this it seems to lose itself, but comes up again 5 or 6 miles to the southeast. All the water in the township is first-class. Good water can be had by digging 10 or 12 feet. The climate is temperate, there being no summer frosts. There are no water-powers, minerals, coal or lignite veins or stone-quarries to be found in the township. Wood for fuel can be had in unlimited quantities, both in this township and in the townships farther east. Timber for building purposes and lumber can be had also. There is a sawmill, situated a few miles east, which saws large quantities of lumber during the winter months. The greater part of the township is very stony, but the land in the western part would be first-class if it were not for this. Moose and deer are very plentiful all through this section of country.—*J. Molloy, D.L.S., 1904.*

(*North outline.*)—The country along this line is alternately covered with

- 10.** spruce, tamarack, poplar and willows and marshy tracts. On some of the latter there are some small spruce, and on others tamarack. Much of the timber is fire-killed with wind-falls, and a new growth is springing up. The land is of third-class quality.—*E. Bray, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Continued.*

(*East outline.*)—Fifty per cent of the land along this boundary is low and marshy. The whole is timbered with tamarack, spruce, white birch and poplar; in some places much of the timber has been destroyed by fire. The soil is of second-class quality.—*J. Johnston, D.L.S., 1872.*

(*Subdivision.*)—The surface is covered chiefly with low flooded swamps, with excellent groves of spruce and tamarack suitable for building purposes. The easterly part is traversed by a stream.—*J. Grant, D.L.S., 1872.*

The greater part of this township is unfit for settlement. It consists principally of a floating muskeg through which Brokenhead river, a stream about 30 feet wide and 8 feet deep, flows. The greater part of the township is unfit to be travelled on, and in many places is impassable without poles or timbers to keep one from going through the sod. The greater part of the township is level. The south and east portions are made up of floating bog covered with bluffs of spruce and tamarack with some small willows. The tiers of sections along the north and west boundaries are mostly covered with poplar and second-growth poplar and willow scrub and some jack-pine. The average diameter of the timber is about 8 inches. Hay can be had in large quantities when the season is dry, but at the present time, places where hay was growing are covered with from 2 to 4 feet of water. The water is all of first-class quality and can be had in large quantities on the ridges by digging a few feet. The water in Brokenhead river is excellent. All the land adjoining the river is flooded in the spring or in a rainy summer season. The climate is temperate, with no summer frosts. There are no water-powers, minerals, coal or lignite veins, nor stone-quarries to be found. Enough stone for building purposes can be had along the ridges in the north and west parts of the township. Tamarack and spruce for wood, fence posts, building purposes or lumber, can be had both in this township and in those to the south and east. Moose and deer are about the only kind of game to be found, but they are very plentiful. There are post offices and a few small country stores within a few miles, as well as schools. The part fit for settlement is well travelled, with good trails leading to the village of Ste. Anne, the city of Winnipeg and other points in the district.—*J. Molloy, D.L.S., 1904.*

(*East outline.*)—The surface is covered alternately with spruce and tamarack
11. or poplar, with an occasional marshy tract. There are a number of extensive windfalls and areas of burnt woods. Where the poplar has been killed, there is a new growth. The land is stony and of third-class quality. Brokenhead river flows through sections 1 and 13.—*E. Bray, D.L.S., 1871.*

(*Subdivision.*)—This township is unfit for settlement. The principal timber is spruce and juniper. Brokenhead river flows through the eastern part of the township. On its banks are some fine groves of hardwood.—*G. A. Bayne, D.L.S., 1873.*

The soil of this township generally is of a light sandy character, excepting along the Brokenhead river where it is first-class. There were many large areas covered with tamarack and spruce, but most of the merchantable timber has been cut. Low-bush cranberries are very plentiful. At one time cedar existed in small quantities, as is shown by the stumps scattered over the surface. All the land in this township is owned by private individuals or real estate companies, but as yet there is only one actual settler.—*C. F. Aylsworth, D.L.S., 1901.*

(*North and east outlines.*)—The surface is undulating and timbered with
12. poplar, spruce, tamarack, red pine and birch, and along Brokenhead river there is a heavy growth of oak, elm, ash and balm of Gilead. The soil is sandy, stony and rocky, except along the river, where there is good sandy loam. There are a number of small marshy tracts. Brokenhead river flows in a northerly direction through the centre of the township.—*E. Bray, D.L.S., 1872.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Continued.*

(*Subdivision*).—This township generally is unfit for settlement, excepting a few sections on the Brokenhead river, which are rich and loamy. The remainder of the township is composed principally of spruce swamps and hay land, with a large area of heavy poplar.—*G. A. Bayne, D.L.S., 1873.*

As far as could be ascertained, the land in this township has all or nearly all been patented. That portion of the township lying to the east of the Brokenhead river is nearly all covered with spruce and tamarack. The best land is found along the Brokenhead river, where there are quite a number of settlers. The soil to the west of the river is generally light.—*C. F. Aylsworth, D.L.S., 1901.*

13. The land is chiefly of an inferior quality, excepting along the banks of Brokenhead river, where it is rich and loamy. The remainder of the township is composed principally of spruce and tamarack swamps and hay land, with a large extent of poplar.—*J. Johnston, D.L.S., 1873.*

14. This township is similar to the foregoing township.—*J. Johnston, D.L.S., 1873.*

West of Brokenhead river this township is very densely settled; east of the river it is only sparsely settled. On the west side of the river the roads have all been graded and ditched; on the east side of the river none of the roads are graded and it is only partially ditched.—*C. F. Aylsworth, D.L.S., 1906.*

15. The township is largely composed of marsh, with a growth of tamarack and willows, except a narrow strip along Brokenhead river, from 2 to 5 chains wide, where the soil is good, and contains some good-sized spruce, elm and poplar.—*J. H. Reiffenstein, D.L.S., 1873.*

There are no settlers living east of the sections which we have surveyed in this township. The land in this township, so far as we could observe, is practically all muskeg.—*C. F. Aylsworth, D.L.S., 1906.*

16. The easterly part of this township is all muskeg. The remainder is swamp, supporting a growth of spruce and tamarack; the trees average from 6 to 7 inches in diameter.—*J. H. Reiffenstein, D.L.S., 1873.*

(*East outline*).—My route of approach to the east boundary of townships 16 & 17, range 8, and north boundary of township 15, range 9, was from the east by way of the Lac du Bonnet branch of the Canadian Pacific railway. I believe, however, that these lines may be more easily approached from Brokenhead settlement to the west. The whole of the east boundary of townships 16 and 17, range 8, passes through an extensive marsh, containing a few scattered tamarack, willow scrub, rushes and long grass. The northern boundary of township 15, range 9, passes through a wooded district, except section 31, and the west half of 32 where the line is situated in the marsh. This district is therefore very flat and wet, the only dry portion being the north boundary of section 33, 34, 35 and 36, township 15, range 9, where the surface is slightly undulating. The only timber occurring upon the above mentioned lines is found on the north boundary of sections 33, 34, 35 and 36 township 15, range 9, where spruce, tamarack and poplar are found, though not in sufficiently large quantities or dimensions to be of great value for lumbering purposes. There is a large amount of hay land extending along the eastern boundary of townships 17 and 16, range 8, and along the north boundary of sections 31 and 32, township 15, range 9, but because of the extremely soft nature of the ground upon which it grows the district is very difficult of access, although it is possible that it may be reached

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Continued.*

from the Brokenhead settlement. No bodies or streams of fresh water occur along the above-mentioned lines, although an abundance of surface water is found everywhere throughout the marshy sections. No water-power occurs along these lines. As the city of Winnipeg is only a short distance from this township the climate is very similar in both localities, being comparatively dry with occasional extremes of both heat and cold. It is, however, suitable for the successful growing of all the ordinary Canadian cereals. An abundant supply of fuel can be obtained from the surrounding forest. Coal is not known to exist in the locality. No stone-quarries nor minerals of economic value are known to occur. Several species of large game are very plentiful in this district, particularly moose, many fine specimens of which we observed during our survey. A smaller variety of deer, commonly known as jumping deer are also numerous, and black bears are occasionally met with. Ruffed grouse and spruce partridges are comparatively common, but few other birds of any description were observed.—*J. W. Tyrrell, D.L.S., 1906.*

The easterly part is muskeg, with a growth of tamarack and willows. The

17. remainder is timbered with pine, tamarack, spruce, birch, poplar and willow.

The surface is rolling. The soil of the westerly part is of good quality. There is no difficulty in obtaining water in any part of the township.—*J. H. Reiffenstein, D.L.S., 1873.*

About one-half of this township has a soil of fair quality for farming purposes, very unevenly distributed, the largest portion being along Catfish creek.

18. This creek is from 40 to 70 feet wide. The good land along the creek is of very variable width, say from 10 to 40 chains on each side. Beyond this is an extensive swamp, which, with some other swamps in the township, occupy about 11,000 acres. Banksian pine, poplar, birch, spruce and ash are found throughout, all of which are fit for building purposes. Much of the land that is at present wet and useless can be made valuable by a system of drains emptying into Catfish creek. On the whole, this township is not a favourable one for settlement in its present state.—*J. Doupe, D.L.S., 1885.*

There is but a small proportion of good land in this township. Parts of **19.** sections 1, 2, 11 and 14, adjacent to Catfish creek, another block comprising parts of sections 4, 5, 8 and 9, and a third piece along the lake shore, consisting of parts of sections 30 and 31, would probably make nearly 2,200 acres of fair land for cultivation. Much more might be added by draining. The remainder of the township is swamp, supporting a growth of small spruce and tamarack.—*J. Doupe, D.L.S., 1885.*

(*North outline*).—This line being less than half a mile in length, runs through heavy spruce, tamarack, birch and balsam to the east shore of lake **20.** Winnipeg. Cordwood was taken out along this line some years ago.—*B. J. Saunders, D.L.S., 1907.*

(*East outline*).—A small bay of lake Winnipeg intersects the east boundary of section 1. Throughout the rest of the township the line runs through level, wet country, consisting of tamarack and spruce swamp, with a few small open muskegs. The soil is third and fourth-class.—*B. J. Saunders, D.L.S., 1907.*

(*Subdivision*).—This fractional township lies on the east side of lake Winnipeg. There is a good strip of land about 20 chains wide, parallel to the shore of the lake, of good first-class soil composed of the best black loam. It is also well timbered with spruce, tamarack and a good percentage of ash and elm. It is notable that there are

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Continued.*

a good many spruce of large size, from 36 to 40 inches, straight and tall. Except for the strip above described, the township is muskeg with a dense growth of black willow scrub and small spruce 3 or 4 inches in diameter. The banks of the lake vary from 10 to 15 feet in height. The beach is alternately muddy, sandy and stony.—A. Bourgeault, D.L.S., 1908.

(*East outline*).—Much of this line falls in lake Winnipeg, the east shore of

- 21.** which it crosses five times. The country is generally wet and level, consisting of spruce and tamarack swamp, while, the shores of the lake being low and marshy, dense willow and alder also occur. This outline crosses the south boundary of the Black River Indian reserve about 10 chains south of the northeast corner of section 25, the reserve extending north throughout the rest of the township. Where the line crosses Black river, the stream is about half a mile wide. The soil is third-class.—B. J. Saunders, D.L.S., 1907.

(*East outline*).—Commencing in a bay of lake Winnipeg, the line enters

- 22.** heavy spruce and tamarack swamp on the east boundary of section 12. Throughout the rest of its length the country remains generally wet, there being a few small clumps of poplar on the dry ground. Open muskegs occur on the east boundaries of sections 25 and 36, the northeast corner of the township falling in the latter one, which extends far to the east. The soil is third-and fourth-class.—B. J. Saunders, D.L.S., 1907.

(*East outline*).—The line commences in open muskeg, but the country

- 23.** changes near the middle of the east boundary of section 1 into heavy spruce and tamarack swamp which runs north to section 25, where the country becomes a little higher and spruce, poplar and balsam occur. Sandy river, a sluggish stream about 4 chains in width, crosses the east boundary of section 25, about 20 chains south of the northeast corner. Heavy spruce, balsam, birch, poplar and tamarack continue to the northeast corner of the township. The soil is fourth-class.—B. J. Saunders, D.L.S., 1907.

(*North outline*).—The line commences in a spruce and tamarack swamp, but

- 24.** the country changes almost immediately to gently rolling country covered with spruce, birch, tamarack, balsam and pitch-pine. This line intersects the east shore of lake Winnipeg on the northern boundary of section 33, at a point 21 chains west of the quarter-section corner. Most of the larger timber was taken out several years ago. The soil is third-and fourth-class.—B. J. Saunders, D.L.S., 1907.

(*East outline*).—This line commences in heavy spruce, balsam, birch, poplar and tamarack, but the country changes into heavy spruce and tamarack swamp near the middle of the east boundary of section 1. Several rock outcrops occur, and near the middle of the east boundary of section 13 the country becomes rolling, and poplar, spruce, birch, balsam and pitch-pine occur. Near the middle of the east boundary of section 25 the country changes again to spruce and tamarack swamp, which continues to the northeast corner of the township.—B. J. Saunders, D.L.S., 1907.

Township 25 is on the east shore of lake Winnipeg, north of Manigo-

- 24 & 25.** tagan river, and is easily accessible from the various landing places of the lake-boats. A fairly regular schedule is maintained by the Phœnix Brick Company with a tug between Winnipeg, Manigotagan and Wanipigow river. Power boats from Selkirk and Gimli also bring freight for the mines at Rice lake during the summer months. Township 24 is south of the mouth of Manigotagan

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 8.—*Concluded.*

river. A trail from Sandy river to Manigotagan passes through this township but can only be used to advantage in the winter months as it was run through the extensive muskegs of this township. Township 25 includes within its limits some very excellent farming land; probably two-thirds of this township is dry and free from muskeg. The soil varies from sandy loam to clay and at present supports a heavy growth of either hay in patches or thick bush of spruce, poplar, birch and balsam. Township 24 is probably two-thirds muskeg, the high land being of clay or loam. The surface of both townships is generally low and level. In the higher portions there is some spruce, balsam and poplar up to 18 inches in diameter but the average is very much smaller as the larger timber was lumbered some years ago. In each township the high land is invariably near the lake. Township 25 has some hay meadows, principally in sections 22 and 13, portions of which were mowed this season and averaged probably one ton per acre. Fresh water is abundant in both townships bordering as they do on the lake, but no streams of any size occur. No land is liable to be flooded other than in the muskegs which are very wet in the spring and after periods of rainy weather. No water-power is available. The heat in the summer is occasionally excessive but is usually tempered by cool breezes from the lake. No summer frosts were noticed. An abundant supply of fuel is available in the form of wood, but no coal nor lignite has been found. No stone-quarries are operated. No minerals of any value have been discovered. Game is abundant and consists of foxes, minks, muskrats, skunks, rabbits, and partridges. The Manigotagan and Wanipigow rivers form the route to the interior of the country in the summer by canoe and in the winter by dog train. A considerable fur-trading industry is carried on in this district, also the gold mines at Rice Lake, though yet in the development stage, require considerable mining material and provisions, all of which are now carried in by this route.—A. Lighthall, D.L.S., 1913.

(*East outline.*)—The line commences in a spruce and tamarack swamp, but

25. the country almost immediately becomes rolling and covered with spruce, balsam, birch, poplar and tamarack. A few ash also occur. The mouth of Manigotagan river crosses the east boundary of section 12, being about half a mile wide. On the north side of the river a strip of fire-killed poplar is found along the bank, but the country soon changes into spruce and tamarack swamp with a few patches of windfall. On the east boundary of section 24 the country becomes rolling, and spruce, poplar, balsam, pitch-pine and birch occur, and continue to within 20 chains of the northeast corner of the township, where spruce swamp is again met with. The soil is third-and fourth-class.—B. J. Saunders, D.L.S., 1908.

(*Part east outline.*)—This line strikes the bank of lake Winnipeg about 20

26. chains north of the southeast corner of the township, running through poplar, birch and balsam. The bank of the lake is rocky and precipitous.—

B. J. Saunders, D.L.S., 1908.

(*North outline.*)—In this range the country is mostly a series of spruce and

80. tamarack swamps, with occasional jack pine ridges, the timber ranging from 2 to 6 inches in diameter and burned only in patches. The soil is a black loam. In some places it is peaty, and on the ridges it is sandy loam. In the easterly half of section 35, a Hudson Bay railway trial line was crossed and in the westerly half of section 36 a trappers' toboggan trail to Split lake. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—B. W. Waugh, D.L.S., 1913.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.

(*North and east outlines.*)—The north boundary crosses a large swamp in

- 1.** which spruce and tamarack from 4 to 12 inches in diameter may be found.

The east boundary is covered with dry poplar and willows, the soil being sandy.

—J. A. Coté, D.L.S., 1902.

(*South outline.*)—Sections 4, 5 and 6 are covered with heavy spruce and popular woods with thick underbrush. The remaining sections have scattering of small poplar with considerable fallen timber. The land is of second-class quality.—W. Pearce, D.L.S., 1877.

(*Subdivision.*)—The soil in this township is mostly second-class, being a sandy loam with a sandy clay subsoil, and is well adapted to grain-growing except the northern row of sections, which is nearly all a large muskeg extending across the township. The land is nearly all covered with thick second-growth poplar and thick willow scrub, although there is a good supply of spruce, tamarack, jack pine and poplar, averaging 6 inches in diameter, well distributed over the township. There is very little hay to be found; there are a few small hay sloughs but the supply is limited. The water is first-class and can be had in good quantities by digging from 10 to 20 feet. There are no creeks or streams. There are no stone-quarries nor minerals, but parts of the township are pretty well covered with surface stones, especially in the northeast corner. Wood can be had in large quantities both in this township and in the township to the east. Moose, deer, prairie-chickens and partridges are very plentiful. This township can be entered only from the southwest corner on account of the large muskegs to the north and east, which cannot be crossed until after they freeze.—J. Molloy, D.L.S., 1904.

(*North and east outlines.*)—The country along the north boundary of sections

- 2.** 31, 32 and 33 is swampy and covered with small dry tamarack. The land along

the north boundary of sections 34, 35 and 36 is also swampy and covered with spruce and tamarack from 4 to 10 inches in diameter. The east boundary passes through swampy land, but the timber is small.—J. A. Coté, D.L.S., 1902.

(*Subdivision.*)—The soil in the township is mostly third-class, consisting principally of a sandy loam averaging about 3 inches deep with a sand or sandy clay subsoil. The soil in the muskegs and hay sloughs is black clay. This township is not very well adapted to grain-growing, on account of the soil being too light. The greater part is covered with tamarack, poplar and jack pine windfall, which will likely all be burned with the first fire. There is very little prairie. The northwestern part is mostly open muskeg. A considerable amount of tamarack, spruce and poplar, averaging about 8 inches in diameter, is still to be found well distributed, but nearly all of this has been killed by fires. Enough hay could be had in the small hay sloughs and on the edges of the muskegs to supply the early settlers until land could be cleared. The water is all of first-class quality, and can be had at a depth of from 4 to 20 feet. The water in the muskegs and swamps is also first-class. There are no creeks or streams to be found. Fuel can be had in large quantities all through the township. There are no minerals nor stone-quarries to be found, although surface stone can be had for building purposes. There is a considerable amount of game to be found; moose and deer are plentiful, as well as prairie-chickens and partridges. Sandilands, a station on the Canadian Northern railway, is about 12 miles to the north. On account of the nature of the soil and the scarcity of muskegs, trails can be easily made.—J. Molloy, D.L.S., 1904.

(*South outline.*)—Along this line there are a number of tracts of grassy

- 3.** marshes alternating with belts of poplar, birch, and small red pine. The land is of third-class quality.—L. Kennedy, D.L.S., 1873.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

(*Subdivision.*)—Most of the northwest quarter of this township consists of rolling sand ridges, partially timbered with jack pine, the greater part of which has been fire-killed. There is a belt of swamp from a quarter to a mile in width extending southerly through the eastern portion. A settler has a shanty and stable in the southeast corner of section 21. Most of the northeast quarter of the township is spruce and tamarack swamp with some good clear cedar along the easterly boundary, and some rolling sand hills, partially timbered with jack pine, in the southwest corner. Sand river, a branch of the Rat river flows southerly through it. (*Southeast quarter.*)—Rat river crosses the east boundary of this quarter about half a mile north of the southeast corner, and flows through it in a westerly and northwesterly direction. Sand river flows south, crossing the north boundary of section 14 close to the northeast corner, and flows in a southerly direction into Rat river. Nearly all that portion south of the Rat river is sandy land, timbered with green jack pine and poplar. There is considerable swamp east of Sand river and north of the Rat river. The balance of the quarter consists largely of sand ridges, timbered with dead jack pine, with irregular narrow strips of swamp between them. (*Southwest quarter.*)—Rat river crosses this quarter of the township in a westerly direction, flowing out at the northwest quarter of section 7. All that portion south of the river is a willow or tamarack swamp; the portion north of the river is of a mixed character, consisting of low sand ridges interspersed with swampy land, particularly along the river. There is a spruce and tamarack swamp of about a mile in width north of the river along the westerly boundary.—W. A. Ducker, D.L.S., 1902.

The greater part of the soil in this township is unfit for grain-growing purposes, as it is mostly of a sandy nature, the greater part being a sandy loam to a depth of 2 or 3 inches with a sand or sandy clay subsoil. The land along Rat river, which enters the township on the east boundary of section 1 and leaves it at the northwest corner of section 7, is mostly a sandy loam and well adapted, when cleared, to grain-growing. There is very little prairie to be found; nearly all of the township is covered with bush consisting of tamarack, spruce, jack pine, poplar, and thick willow, poplar and jack pine scrub. The timber averages about 8 inches in diameter. Hay can be had in the small hay sloughs, in the muskegs and along the banks of the river. All the water is of first-class quality, both in the river and in the small creeks. Good water can be had by digging from 4 to 20 feet in almost any part of the township. There are no water-powers; Rat river, the only stream of a sufficient size, is only from 3 to 5 feet deep and from 10 to 20 feet wide. Fuel, both dry and green, can be had in large quantities, tamarack, spruce, poplar and jack pine being the principal varieties. There are no stone-quarries nor minerals; some surface stones can be found. Moose, deer, wolves, prairie-chickens and partridges are very plentiful. The Canadian Northern railway runs through the township to the north, in which the station of Sandilands is situated, where there is a store, post office and saw-mill.—J. Molloy, D.L.S., 1904.

4. (*North outline.*)—The country along this line is rolling and stony. It is timbered with oak, elm, poplar, birch, spruce, tamarack, cedar and Norway pine. There are occasional marshy tracts.—L. Kennedy, D.L.S., 1873.

(*Subdivision.*)—We surveyed the east outline of this township and subdivided the northern and eastern parts, these being the only portions fit for settlement. The remainder of the township is swampy and covered with spruce, tamarack and cedar of an average diameter of 6 inches and suitable only for fuel and fence rails. The soil of the parts subdivided is second-class and is covered with jack pine partially killed by fire. The Canadian Northern railway crosses sections 33, 28, 27, 22, 23, 24 and 13; Sandilands is situated in the northeast quarter of section 22.—J. A. Coté, D.L.S., 1901.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

There is very little land in the south half of this township fit for farming of any kind. The soil is nearly all sand except in the swamps. The greater part of it is covered with jack pine, spruce, tamarack, poplar and scrub, the average diameter of the timber being about 8 inches, and it is equally distributed over the different sections; a great deal of the wood has been cut. The land for the most part is rolling or undulating. There is very little hay to be found, except in a few small hay sloughs; there are no large hay meadows. A few small creeks containing good water pass through the township. The water is of first-class quality. There are no water-powers to be found. Wood in large quantities can be had all through this district, consisting of jack pine, tamarack, spruce and poplar. There are no coal or lignite veins, stone-quarries nor minerals to be found. The principal game is moose, deer and prairie-chickens. The main line of the Canadian Northern railway passes through the northeast quarter of the township.—*J. Molloy, D.L.S., 1904.*

5. The portion of this township between Bedford and Marchand is swampy and covered with tamarack, spruce and cedar suitable only for fuel and fence rails. The remainder of the township is very sandy and hilly and is covered chiefly with partially fire-killed jack pine. In sections 4 and 9, the soil is second-class. Sections 5, 6, 7 and 8 are a tamarack, spruce and cedar swamp. The Canadian Northern railway crosses sections 9 and 3, Bedford station is situated on the southwest quarter of section 9.—*J. A. Coté, D.L.S., 1901.*

The surface of section 4 is undulating to hilly with some spruce and tamarack swamp along its western boundary, but the greater portion is rolling sand hills sparsely timbered with small jack pine. The Canadian Northern railway crosses the west half of the township in a north and south direction. The surface of section 5 is very level, most of it being tamarack and spruce swamp with some small cedar in places. Nearly all the tamarack is under 12 inches in diameter, but much of it is very dense and would furnish a large quantity of excellent fuel. Most of the west half of section 6 is swampy and partially covered with small dead tamarack. Nearly all the balance of the section is well timbered with tamarack up to 12 inches in diameter, also a considerable quantity of spruce and some cedar. Nearly all the west half of section 7 is marsh interspersed with small dead tamarack; the balance is thickly timbered with tamarack, spruce and cedar, although very few trees are 12 inches in diameter. Nearly all the west half of section 9 is spruce and tamarack swamp with a dense growth of timber under 12 inches in diameter. The east half is chiefly rolling sand hills, sparsely timbered with stunted jack pine. The Canadian Northern railway crosses this section in a north and south direction, and Bedford station is located on the southeast quarter. Section 16 is nearly all spruce, tamarack and cedar swamp and a considerable portion of the timber has been cut into cordwood. The Canadian Northern railway runs through it in a southeasterly direction. Sections 17 and 18 are very wet spruce and tamarack swamp intermixed with some cedar. The timber is small but much of it is suitable for fences. Sections 19, 20, 21, 27, 28, 30, 31, 32, 33 and 34 are low and swampy, although there are some narrow ridges timbered with poplar and jack pine in the northwest quarter of the township. A considerable portion of the timber in the northwest quarter of the township has been fire-killed, and consists of small spruce and tamarack. The balance of the timber on this portion is spruce, tamarack and cedar, suitable for fuel, building logs and fence posts, most of the largest having been culled for lumber or ties. Sections 1, 2, 3, 10, 12, 13, 14, 15, 22, 23, 24, 25, 31 and 33 are located on the westerly slope of the Cypress mountains, and consist chiefly of rolling sand hills, sparsely timbered with stunted jack pine and some spruce and tamarack of fair size in the hollows.—*W. A. Ducker, D.L.S., 1902.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

The greater part of the soil in this township is unfit for farming purposes, being of a very sandy nature with about 10 inches of sandy loam and a sand or gravel subsoil, except in the spruce and tamarack swamps, where the soil is a black loam, but until cleared and drained will be unfit for cultivation. Nearly all the surface is covered with timber. In the western and northwestern parts there is spruce and tamarack from 4 to 10 inches in diameter, while in the eastern and southeastern parts there is jack pine and brûlé, the jack pine averaging about 7 inches in diameter. There is no hay in the township. The water, which is found wherever the spruce and tamarack is growing, is of first-class quality. A few small creeks were found which contain good, pure water. The land is not liable to be flooded but in wet seasons the swamps are wet. Wherever the jack pine is found there is no water of any kind, except what can be obtained by digging. There are no water-powers. Fuel can be had in large quantities both in this and in the adjacent townships, consisting of tamarack, spruce, jack pine, and poplar. There are no stone-quarries, coal or lignite veins. There is very little game, but moose, deer and bears are found in the township to the north. The township is well travelled, with good trails leading to Marchand, Ste. Anne and other points along the Canadian Northern railway, which passes through the western part of the township. The station of Bedford is situated on section 9, from where a large quantity of wood is shipped.—*J. Molloy, D.L.S., 1905.*

6. (*North outline.*)—The country through which this line passes is mostly swampy, the surface being strewn with granite boulders and timbered with small spruce and tamarack. In a few places the timber measures up to 24 inches in diameter; it is intermixed with large cedar and balsam. There are a number of dry ridges, which are covered with poplar, spruce, birch, Norway pine, balsam, and tamarack from 4 to 18 inches in diameter.—*L. Kennedy, D.L.S., 1873.*

The easiest way to reach this township is from Marchand, a station on the Canadian Northern railway, but a considerable portion of it would be inaccessible in summer owing to its marshy character. About one-third of the township consists of muskeg and most of the remainder is swampy, and on the few ridges that are dry, the soil is shallow and stony. Most of the timber suitable for fuel or other purposes has been removed as the township has been under timber lease for a number of years. Most of what remains is small and fire-killed. There is very little hay to be found, as nearly all the open land is muskeg. There are no streams of consequence, but water is abundant and of good quality in winter. There is still a considerable quantity of dead timber suitable for fuel if used before it rots. No minerals were found. This township is close to the railway but there are still moose, deer and a few lynxes. Prairie-chickens, partridges and rabbits are plentiful. The township is of very little value for any purpose unless it produces a new growth of timber.—*W. A. Ducker, D.L.S., 1903.*

(*East and south outlines.*)—Most of section 1 and parts of sections 2 and 12 are situated on the westerly slope of a range of hills, known locally as the Cypress mountains, and consist of rolling sand hills with a few scattered jack pine. The balance of the township is very level and swampy, the east half being timbered with small belts and clumps of small tamarack and some spruce with open marshes intervening. Nearly all the timber on the west half of the township is fire-killed; considerable of it is fit for fuel, but the next fire that passes through that portion of the township will destroy all the wood. The surface generally throughout the township is a thick growth of moss overlying wet peaty mould, except on a few low ridges which are very stony.—*W. A. Ducker, D.L.S., 1902.*

(*Subdivision.*)—The soil of this township is nearly all first-class for farming purposes, being a black or sandy loam with a clay subsoil, with the exception of parts of

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

sections 1 and 12, which are for the greater part sandy ridges. The southern part of the township has nearly all been burnt over, but the timber is still standing and under-brush has grown up. The timber averages about 6 inches in diameter and is equally distributed over the township. The timber is mostly spruce and tamarack with some cedar. There are very few hay sloughs to be found, but by having some clearing done large quantities of hay could be had. All the water is of first-class quality. A few small creeks are to be found and excellent water can be had by digging in almost any part of the township. There are no water-powers, stone-quarries, lignite veins nor minerals of any kind to be found. All through this district game is plentiful, consisting of moose, deer, black bears, wolves and foxes. Trails run through the township going to Woodridge, Bedford and Ste. Anne, towns on the Canadian Northern railway.—J. Molloy, D.L.S., 1905.

(*South and west outlines.*)—This township would be difficult to reach in summer,

7. the best way probably being from the Dawson road. With the exception of a strip of sandy poor soil along the northern limit, nearly all the township is very swampy, and there is considerable muskeg. With the exception of the muskegs, most of the surface is timbered with jack pine on the ridges, and spruce and tamarack on the lower portions. All the larger timber has been removed, and the greater portion of the balance is fire-killed, but the tamarack is still sound. There is very little hay in the township. Brokenhead river, a small stream about 15 feet wide, rises in a shallow lake, about 60 acres in area, in the southeast portion of the township. It has only one small branch, but water is abundant and of good quality. There is no water-power. No minerals nor rock-in-place were noticed. Moose and deer, with prairie-chickens, partridges, rabbits and lynx are found. The township is of very little value for settlement.—W. A. Ducker, D.L.S., 1903.

(*Subdivision.*)—This township is easily reached by the Dawson road from Ste. Anne, and the Sprague trail, which leaves the Dawson road in section 11, township 8, range 9, and runs in a southerly and easterly direction through the northeast quarter of section 36 of this township. Both the Dawson road and the Sprague trail are in good condition. No entrance, except as above, could be made with horses in summer time. The lower portions of the township are covered with a thick growth of peaty moss and the greater part of the higher portions is sandy and stony, though some parts have a thin top-dressing of black loam. In general, the soil is not good for agriculture, though a small portion of arable land, consisting of black loam on a subsoil of sandy loam or sand, is found in portions of sections 21, 22, 27, 28, 32 and 33. The whole of the surface is covered with bush or heavy scrub with occasional marshes scattered throughout the township. The southeastern quarter of the township is swampy and in some places there are floating bogs or muskegs which render this portion nearly impassable. The northern and northwestern portions consist of sandy and stony ridges. The timber consists of tamarack, spruce, jack pine, and poplar, very little of which could be used for lumber as it is either too small or too crooked. A few railroad ties and fence posts could be cut in the eastern portions of the township. Practically the whole of the central and western parts have been burnt over and the timber is nearly all fire-killed, but is mostly standing yet. A small amount of coarse hay could be cut in sections 29, 30 and 31. Other small hay meadows are scattered throughout the township, but these would be suitable only for pasturage. Water is plentiful and permanent in the eastern and southern portions of the township but the northwestern portion is dry, and in a dry summer, water could be got only by digging, except for one marsh located at the northeast corner of section 30. All the water is fresh. A shallow lake of about 140 acres in area is located at the corner of sections 1, 2, 11 and 12. Brokenhead river takes its rise in sections 35 and 36. A small branch flows out of each of the above-mentioned sections and they unite in section 2, township 8, range 9. These branches at the time of

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

survey were very small streams, about 1 foot wide and 1 foot deep with a slow current. No falls, or rapids occur and no water-power could be developed. Practically the whole of sections 1, 2, 3, 10, 11, 12, 13, 14, 15 and 23 are more or less flooded all the time. The climate is very mild and no summer frosts occurred. Fuel, consisting of tamarack, spruce and jack pine, is plentiful in all parts of the township. No coal or lignite veins were seen. No stone-in-place was seen, though surface stones and boulders were plentiful in the northwestern portion of the township. No minerals of economic value were encountered. Traces of moose and bears are plentiful, but other game is scarce.—*H. S. Holcroft, D.L.S., 1906.*

(*North outline.*)—The country along this line is timbered with small poplar,

- 8.** tamarack, spruce, cedar and white birch. A muskeg is found in the northern part of section 31. There is a stream of about 35 feet in width in section 33, and the Brokenhead river in section 35. The land is of second-class quality.—*J. Johnston, D.L.S., 1871.*

(*Subdivision.*)—The Dawson road makes this township easily accessible from Ste. Anne. Most of the north half and the southwest quarter is low and swampy with sandy ridges, some of which in the southwest quarter, are of considerable area. Most of the southeast quarter is high, rolling sandy land, and all the higher portions are very stony, many of the granite boulders being of enormous size. With the exception of the southeast quarter, which is rolling, most of the surface is level and swampy, and covered with spruce and tamarack on the lower ground and jack pine and poplar on the rolling portions. There are some ridges in the north half timbered with poplar up to 8 inches in diameter, but the greater part of the timber in this half is spruce, tamarack and cedar, under 10 inches in diameter. Most of the timber in the southeast quarter is jack pine under 8 inches. The greater part of the timber on the southwest quarter has been fire-killed and the best of it removed. A small quantity of hay can be cut near the Dawson road in the westerly portion of the township. Brokenhead river (with some small branches) flows through the township. It is about 20 feet wide where it crosses the north boundary and probably about 2 feet deep. Water seems abundant, and of good quality. There are no water-powers. For fuel there is a large amount of good tamarack in the northern half and jack pine in the southeastern quarter; several hundred cords were cut during the past winter, but it is too far from a railway to be of much value for commercial purposes. No minerals, nor rock-in-place were noticed. Most of the dry land is too light and stony to be of much value for agricultural purposes.—*W. A. Ducker, D.L.S., 1903.*

The greater part of the soil in this township is suitable for farming purposes, being a black or sandy soil with a clay subsoil. The greater part of the township is also covered with bush, but of such a nature that it will not be hard to clear, especially in the southwest quarter of the township. The remaining part of the township is mostly covered with heavy bush, consisting principally of spruce, tamarack and jackpine, from 5 to 12 inches in diameter. The jack pine is found in the southeast portion of the township, and the spruce and tamarack in the north half. There is very little hay to be found except in sections 17, 18, 19 and 20, but it is very plentiful in the township to the west. Water is very plentiful and of first-class quality in the creeks and swamps. There are no water-powers and the land is not liable to be flooded. Fuel is very plentiful all through this section of the country, such as jack pine, spruce, tamarack and poplar. There are no stone-quarries, coal or lignite veins nor minerals of any kind. Game, consisting of moose, deer and black bears is very plentiful. The Dawson road passes through the centre of this township in an east and west direction. This road leads to Ste. Anne, a village of about 500 inhabitants, situated on the main line of the Canadian Northern railway, about 15 miles to the west. At Richer post office in the township to the west there is a school.—*J. Molloy, D.L.S., 1905.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

This township is reached from Ste. Anne on the Canadian Northern railway,

- 9.** by following the Dawson road as far as section 17, township 8, range 9. From here we followed a logging trail, which has a general northeasterly direction, to Chartier's saw-mill, in section 12 of this township. A good trail leaves this trail in section 1 and runs north and then west to section 14. This township is composed of three general classes of country: (1) High level ground covered with poplar, willow and windfall. This class occupies southwest half section 25, northeast half section 26, southwest half section 35, section 34, northeast quarter section 33, section 1, northeast half section 2, section 12, section 11, southwest quarter section 13, west half section 15, sections 16, 20, 21, southwest half section 29, east quarter section 30 and east half section 31. In places this class also carries a little jack pine. The soil is light and sandy, with numerous stones and boulders. (2) Swamp and muskeg, heavily covered with spruce, tamarack and cedar, from 2 to 10 inches in diameter, and occupying southwest three-quarters section 36, northeast third section 35, northeast third section 25, section 24, north two-thirds section 13, north two-thirds section 14, section 23, southwest half section 26, northeast half section 27, east half section 15, section 10, section 3, southwest half section 2 and southeast quarter section 4. The soil is a black loam or vegetable mould. (3) Swamp and muskeg, partly open and partly covered with dead spruce and tamarack and willow scrub. This class occupies northeast quarter section 36, southwest half section 33, east half section 32, northeast three-quarters section 28, southwest half section 27, northeast half section 22, north half section 4, south half section 9, sections 5, 6, 7, 8 and 18, west half section 17, section 19, west half section 30, west quarter section 31. This is wet and marshy and covered to a depth of several feet with moss. The location of the timber is described above. The spruce and tamarack is all too small for lumbering purposes, the best having been taken out by the settlers around Ste. Anne. There is a poplar and jack pine ridge in section 12, which, however, has also been cut over. No hay is to be found. Water is all fresh and the supply abundant and permanent. A small stream enters the township on the south boundary of section 2 and crosses the east boundary of section 3 at 18 chains north of the south boundary. It then empties into the large marsh occupying the southwest corner of the township, and is not noticeable on any other of the lines in the township. The area described above under (3) would probably be flooded to a depth of 2 feet in a wet season. At the time of the survey (May and June), however, water occurred only to a depth of about 6 inches. No water-power is available. The climate is moderate, with light frosts in the early part of June. Firewood, consisting of dead spruce, tamarack and poplar, is everywhere plentiful. The supply is sufficient for the wants of settlers for many years. No stone-quarries or minerals are to be found. The game consists of moose, red deer, bears, grouse, porcupines, weasels and wild turkeys.—

J. L. R. Parsons, D.L.S., 1906.

This township was reached from section 34, township 9, range 9, by my own

- 10.** trail northerly along the east boundary of section 4 to the quarter-section corner on the east boundary of section 9. From this point my camp had to be packed by men to section 27, as the surface was of too soft and swampy a nature to allow the use of horses and wagons. The soil of the township may be divided into three general classes: (1) High ground, wooded with poplar, willow and a few jack pine. This class is sandy, with many boulders, but in a few places white clay was encountered. It is, however, of too light a quality to be suited for agricultural purposes. It comprises the northeast quarter section 32, 33, southwest three-quarters 34, 27, east half 28, northeast quarter 22, 23, south half 24, 14, 13, west half 3, 4, 6 and 7. (2) Swamp or muskeg, wooded with spruce and tamarack, or fire-killed spruce and tamarack. The soil in this class is invariably a deep black loam, but is not suited for agricultural

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

purposes on account of the presence of a great deal of water. It can doubtless, however, be drained and should then be valuable. It comprises section 36, northeast quarter section 35, southwest three-quarters sections 32, 31, 29, west half 28, east half 26, northeast half 24, south half 22, 21, northeast quarter 20, east half 19, 11, 12, 2, northeast and southwest quarter sections 1, 10, northwest three-quarters 9, 8, northeast quarter 5 and northeast quarter 3. (3) Marsh of muskeg containing a great deal of water, with scattered dead tamarack and scrub, and being composed of moss to a depth of several feet. It is unfit for agriculture. This class comprises southeast quarter 35, 25, north half 30, middle third of 20, east half 18, 17, 16, west half 15 and middle third 1. The surface is level and covered with timber as described above. All the best timber has been cut in the township, but the young tamarack, spruce, poplar and jack pine should be large enough to cut in a few years. There is no hay. Fresh water is abundant and the supply permanent. A branch of Brokenhead river crosses section 36. It is 2 chains wide and 4 feet deep and flows with a current of about $1\frac{1}{2}$ miles per hour. Its banks are well defined and flooding is therefore improbable. No water-powers occur. The climate is moderate with abundant rainfall in June (during the time of the survey), with no frosts at this time. Good fuel is everywhere obtainable among the fire-killed timber and windfall. There were no stone-quarries nor minerals found. Moose, red deer, bears and partridges are all quite numerous.—*J. L. R. Parsons, D.L.S., 1906.*

Two-thirds of this township is composed of muskeg, overgrown with spruce

- 11.** and tamarack, which vary in size from 2 to 10 inches in diameter; a considerable portion of this timber has been destroyed by fire, and is now of no value. On the drier portion of the township there is a growth of poplar, birch and pine, with thick willows. The soil throughout is fair, and a large area of it can, by a moderate expenditure, be drained into Brokenhead river, which affords ample facilities for drainage purposes. There is a fair average of good land in the township, as fully indicated by the turned-up roots of the fallen timber; it is of clay sand and clay loam on a bed of stiff clay and gravel, and varies from 4 to 12 inches in depth.—*J. W. Fitzgerald, D.L.S., 1886.*

(*North outline*).—The country along this line is timbered with red pine,

- 12.** spruce, birch, balsam, poplar and tamarack. The surface is rolling, sandy and stony. There are a number of marshy tracts.—*E. Bray, D.L.S., 1872.*

(*Subdivision*).—With the exception of a few sections in the northwesterly part, the soil throughout is of an inferior quality; the northeasterly portion is too light for agricultural purposes, and the rest of the township is composed principally of muskeg overgrown with spruce and tamarack, which varies in size from 2 to 10 inches in diameter. The soil in sections 19, 29, 30, 31 and 32 is excellent clay loam, with clay subsoil, and is timbered with poplar, willows and scattered spruce. The township is almost uniformly flat, but can easily be drained into Brokenhead river.—*J. W. Fitzgerald, D.L.S., 1886.*

The greater part of this township is rather heavily timbered with poplar,

- 13.** birch, spruce, tamarack and jack pine, interspersed with tracts of thick scrub and willow. The poplar and birch run up to 20 inches in diameter, and larger tracts of tamarack and spruce yield up to 20 inches in diameter. The northeastern sections are rolling, the soil light and sandy, with rocky outcrops. The subsoil in these sections is sandy and gravelly, with stone and rock. The township might easily be drained either into the Winnipeg or Brokenhead rivers at comparatively little expense.—*J. W. Fitzgerald, D.L.S., 1886.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

The southeast corner of the township is crossed by the Lac du Bonnet branch

14. of the Canadian Pacific railway, a wood siding, Milner, being in section 12.

The township is mostly swamp muskeg or sand ridge, but there is a strip of good land along the west boundary and perhaps some more about the middle of the northeast quarter of the township. The latter, however, is covered with heavy woods, both green timber and brûlé. A number of Galicians have settled in the western tier of sections but on account of their buildings being scattered in the scrub, it is impossible for me to show the position of them in my notes. The timber is mostly spruce and tamarack, small in the wettest parts of the swamps and larger in the drier portions. All the large timber has been cut. Much cordwood is cut here every winter. There are no hay meadows, except those claimed by the settlers along the west boundary. The water is fresh. There is a small lake, lake Mooswa, in section 24, and there are several small creeks which lose themselves in the swamps. No coal, minerals, nor stone of any economic value were seen. Moose, deer, timber wolves, prairie-chickens and partridges are plentiful.—G. H. Watt, D.L.S., 1906.

15. (*North outline.*)—See the report on the east outline of townships 16 and 17, range 8.—J. W. Tyrrell, D.L.S., 1906.

(*Subdivision.*)—There is no summer road at present reaching this township but a good winter road crosses from Milner siding on the east to the Brokenhead River country on the west, passing across the southern part of the township. On May 24 this road was frozen solid where it crossed the muskegs. The only good land there is exists in isolated sections. The township is mostly swampy except some very stony ridges of sand. Most of the surface is covered with timber ranging from scrub and deadfall to large poplar and spruce. There are some hay meadows in the northeast corner of the township and also near the west boundary along the edges of marshes existing there. The water is all fresh. There are some small creeks but they were not located or noticed in the winter as the snow was deep. They flow from the muskegs westerly into the marshes. No stone, minerals, coal or water-powers were observed. Moose, deer, prairie-chickens, wolves and small game are found.—G. H. Watt, D.L.S., 1906.

This township is situated about 12 miles south of Fort Alexander and about

16. the same distance northwest of Lac du Bonnet, the terminal point of a short branch of the Canadian Pacific railway, from which point it is most easily

accessible. On account of extensive marshes and swamps in the neighbourhood the township is very difficult of access, at any time of the year, except when the swamps are solidly frozen, which does not always occur even in winter, when a great depth of snow falls early in the season. There is nothing in the shape of a travelled highway, or even a well opened bush road into this township, the only means of access being over a winter road cut by the party during my survey. This road leads in a northwesterly direction from Lac du Bonnet into the centre of township 16, range 10, thence directly west to the centre of this township, and from this point in a northerly direction to township 17, range 9. The soil of the township varies from black muck in the western part to clay in the more central districts and sand and boulders in the east. Many central sections when cleared of timber appear to be well suited for general farming purposes, the eastern sections being more hilly and strewn with great boulders rendering the soil less fit for cultivation, but quite suitable for grazing purposes. As above stated, the eastern portion of this township is somewhat hilly. The end of a long gravel ridge, which reaches several miles to the east extends over portions of sections 13, 24 and 25. The summit of this ridge crosses the eastern boundary near the northeast

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

corner of section 13, and is about 100 feet above the surrounding country. A large portion of this ridge is covered by jack pine timber. The central portion of the township to the west of the above mentioned ridge is covered chiefly by poplar, birch and spruce timber, little of which was found to be of large size. The most westerly tier of sections is composed almost entirely of marshy land, overgrown in part with small tamarack, willow and alder scrub. This marsh even at the date of survey (February) was still so soft as to barely carry our party, and was quite too soft to carry the teams. Although the greater portion of this township is covered with timber, little was found to be of sufficient size or quality to be of value for milling purposes. A few spruce occur in various places sufficiently large to be sawn into lumber. The same may be said of the jack pine covering the central portion of the eastern tier of sections, but the quantity is too limited to make the township of value as a timber berth. There is one large hay meadow in this township, occupying a portion of sections 22, 23 and 27 in the centre of which is a small open slough. Hay is also found in the most westerly tier of sections in the township, but because of the soft marshy nature of the country on which it grows access to it very difficult and it will probably be of little value until a system of drainage is established. The only open water occurring in this township is found in a small slough situated upon the northeast quarter of section 22, although an abundance of surface water is found everywhere upon the marshy sections in the western portion of the township. It might be mentioned that some fresh-water springs were observed on the northern slope of the centre ridge in sections 25, 24 and 13. No water-power exists in this township. As this township is close to the city of Winnipeg, the climate is very similar in both localities, being comparatively dry with occasional extremes both of heat and cold. It is however not such as to prevent the successful growing of all the ordinary Canadian cereals. Coal is not known to exist in the locality, but there is an abundance of wood in all parts of the township. No rock exposures are known to occur in this township from which building stone might be quarried. No minerals of economic value are known to occur. Several species of large game are very common in this district, particularly moose, many fine specimens of which were observed, during our survey. A smaller variety of deer, commonly known as jumping deer, are also numerous, while black bears are occasionally met with. Ruffed grouse and spruce partridges are comparatively common, but few other birds of any kind were observed.—J. W. Tyrrell, D.L.S., 1906.

17. (*North outline.*)—The country along this line is all muskeg, except in section 36, where the land is of second-class quality. There are occasional rock exposures and bluffs of poplar, spruce, pine and tamarack in this section. In the muskeg there are occasional small bluffs of tamarack. There is a small creek running northerly through section 31.—W. Pearce, D.L.S., 1878.

(*Subdivision.*)—Because of extensive swamps and muskegs, situated both to the east and west, across the township is very difficult except during the winter season, when the swamps are solidly frozen. During the past winter while we were engaged in the survey of this township it was found that the frost did not penetrate these swamps, owing to the deep snow occurring early in the season and they were but slightly frozen throughout the entire winter. Consequently it was with the greatest difficulty that I was able to gain access to the various parts of the township having to make roads by tramping the snow with snowshoes and allowing it to freeze solidly for some days previous to our passing over it. The township is situated about 6 miles directly south of Fort Alexander and when the swamps are frozen it is very easily reached from that place. The soil of the eastern portion is composed chiefly of heavy clay, while the western part consists almost entirely of soft muskeg or marsh, which in some places is grown up with small scrub, tamarack and willow, while other parts are more open,

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

containing only tall rushes and long bluejoint grass, which in some places was observed to be 8 feet high. There is a considerable area of land in the eastern sections of the township well situated for general agricultural purposes, after being cleared of timber, but the whole western portion is utterly unfit, in its present state, for occupation in any capacity. It seems quite probable, however, that even this marshy section of country can be drained as it is situated comparatively near Winnipeg river and at a considerable height above it, and the construction of a drainage system, therefore, might change this marsh area into very valuable land. The surface of the eastern portion is more or less rolling and hilly in some places, but the western portion comprises one vast, flat marsh, grown up as already stated with tamarack, willow and rushes. The distribution of timber corresponds practically to that of the dry land, and thus occurs upon the eastern sections of the township. The chief variety is white poplar, although a few spruce and tamarack, large enough for lumber occur scattered throughout the various sections. As a whole, it may be said to contain a comparatively small amount of valuable timber, by far the greater portion being covered with small tamarack and black spruce. A large quantity of bluejoint and other varieties of grass occur in the western half, but under present conditions it is of little or no value, as during the ordinary seasons access to it is quite impossible. In the west part of section 22 we discovered a small stack of hay, which had been cut several years previously but could not be removed owing to the land being too soft to admit of the passage of horses or wagons. No lakes or fresh water streams of any importance occur, but almost the entire surface is abundantly supplied with marsh or swamp water. No water-powers exist. As the city of Winnipeg is only a short distance from this township the climate is very similar in both localities, being comparatively dry with occasional extremes both of heat and cold. It does not, however, prevent the successful growing of all the ordinary Canadian cereals. Coal is not known to exist in the locality but there is an abundance of wood in all parts. Few rock exposures occur as the greater part of the surface is composed of swamp or marsh. A few bluffs of granite however, were noticed in some of the eastern sections, and it is possible that from these good building stone might be obtained. No minerals of economic value are known to occur. Several species of large game are very abundant in this district, particularly moose, many fine specimens of which were observed during our survey. A smaller variety of deer commonly known as jumping deer is also very common and black bears are occasionally met with. Ruffed grouse and spruce-partridges are comparatively common, but few other birds of any description were observed.—J. W. Tyrrell, D.L.S., 1906.

Nearly all of this township consists of spruce and tamarack swamps and muskeg. In some places there are islands of dry land of all sizes, up to 50 or 60 acres in extent, covered with tamarack and spruce or mixed with poplar, birch and balsam. In its present state, the township is not suitable for agricultural purposes. With a comparatively small expenditure, the township could be drained into Catfish creek, and much land made valuable for farming purposes.—J. Doupe, D.L.S., 1885.

(*North outline.*)—This line commences in a spruce and tamarack swamp and 20. the country almost immediately becomes rolling and covered with dense poplar and birch which change to heavy spruce, balsam, tamarack and pitch-pine near the northeast corner of section 31. This latter class of country continues generally throughout the township, the hollows consisting of tamarack and spruce swamp. Several rocky ridges generally running in a northeast direction occur. The soil varies from third-to fourth-class.—B. J. Saunders, D.L.S., 1907.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

(*Subdivision.*)—A great portion of this township is muskeg, or low wet land. About 80 per cent of its surface is muskeg, covered with a dense growth of black willow scrub and black spruce of small size, good only for fuel. The moss in some places attained a depth of 4 to 5 feet, sometimes overgrown with poor hay. There are a few scattered bluffs of spruce and tamarack good for ties and a great many good only for rails. There is a timber belt along the north boundary about half a mile wide of good-sized spruce and tamarack, suitable for timber. This belt is, or should be, included in the Black River timber berth. There is a timber berth, No. 1252, of 4 square miles. It was noticed during the progress of the survey that all the timber suitable for ties amounting to 15,000 and a few hundred logs; had been cut on this timber berth; this enabled me to make a fair estimate of the rest of this township, amounting to about 35,000 ties and 2,000 logs of spruce and tamarack besides the poplar. This township is not good for farming purposes. The 20 per cent of high and dry land is for the most part stony and very often rock. However, the wet portion may be readily drained into lake Winnipeg.—*A. Bourgeault, D.L.S., 1908.*

(*North outline.*)—This line commences in a spruce and tamarack swamp, but

24. the country immediately becomes rolling and rocky and covered with heavy spruce, pitch-pine, birch, balsam and tamarack. This class of timber continues east to the corner of the township. The line crosses Manigotagan settlement in sections 31, 32 and 33. Manigotagan river crosses the north boundary of section 35, being about 5 chains in width. The soil is third-and fourth-class.—*B. J. Saunders, D.L.S., 1908.*

(*Subdivision.*)—This township is situated near the shore of lake Winnipeg, about 100 miles from Winnipeg city, and is easily reached from there or from Selkirk by steamer. The soil is principally clay with a few outcroppings of rock and some fairly extensive muskegs. The surface is very level and is covered with heavy timber, poplar, jack pine, birch and balsam growing on the high land, with tamarack and spruce in the muskegs. On the high land the trees reach 18 inches in diameter and in the muskegs about 6 inches. Very little hay was found in this township, except a narrow strip on each side of Duncan creek in sections 20, 29 and 32. An abundance of fresh water is found. Manigotagan river, a stream about 4 chains wide and 20 feet deep with an average current of about 2 miles per hour, flows through the northeast part. The banks are fairly high so that there is no danger of floods. There are numerous rapids and falls in the river; the Poplar falls, Jackpine falls and Crystal falls, each about 15 feet in height, could all be used for developing power and should furnish about 200 horse-power each. The climate is very hot in summer and cold in winter and being close to lake Winnipeg is exposed to the high winds off the lake. Frost occurred about the 20th of September (1913). Wood fuel is plentiful, but no coal nor lignite occurs. No stone-quarries were seen. No minerals have as yet been found in the township, but farther up Manigotagan river the country is being prospected and some valuable veins of gold and silver have been found. Game is plentiful, moose, deer, a few elks and bears being the larger game, while rabbits and partridges are very numerous. No settlers have located in this township up to the present. In years past a great deal of timber was cut here and converted into lumber at the mill in Manigotagan settlement, but this industry has not been carried on for several years past.—*A. Lighthall, D.L.S., 1913.*

25. This township is situated on the east shore of lake Winnipeg, about 100 miles north of Winnipeg city, and easily reached from there or from Selkirk by steamer. The soil is clay along the rivers and there is a high sandy ridge

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 9.—*Continued.*

about half a mile in width running diagonally across the township from section 30 to section 12. The clay portions would make good agricultural land when cleared of bush, but the sandy ridge is too dry to produce anything but blueberries. The surface is rolling and is covered with bush, poplar, jackpine, birch and spruce growing on the high land, and tamarack and spruce in the muskegs. The timber on the high land reaches 18 inches in diameter; that in the muskegs about 6 inches. About 100 acres of wild hay land were found in sections 1 and 2 and about 75 acres in section 18. The township is well watered with good fresh water. Manigotagan river flows through the southwest corner and Wanipigow river through the northeast corner of the township; each is about 4 chains wide and 20 feet deep. The current in each case is about 1 mile per hour. Their banks are high, so there is no danger of their flooding the land. Manigotagan river in this township has one fall, called Woodsfalls, with a drop of about 18 feet, where a very good water-power could be developed. It would furnish without damming about 200 horse-power. The climate is suitable for agriculture, the settlers in Manigotagan settlement growing all the ordinary grains and vegetables. No summer frosts were noted. Wood is plentiful and can be procured anywhere in the township. No coal, lignite nor stone-quarries exist. None of the precious minerals has been found in the township, but a brick-yard has been started in Manigotagan settlement, where a good quality of brick clay is found. Game is plentiful, moose, deer, bears, partridges and rabbits being encountered frequently. In the early winter a few ptarmigans were seen, which the settlers say is very unusual. At present very little agriculture is carried on, the settlers in Manigotagan settlement living chiefly by hunting, fishing and cutting cord-wood for the lake steamers.—A. Lighthall, D.L.S., 1913.

This township is easily reached by boat from Winnipeg or Selkirk, being situated on the eastern shore of lake Winnipeg, about 80 miles from the mouth of the Red river. The country is largely composed of rock ridges, burnt over and covered with windfalls and a second growth of jackpine and poplar. There are a few muskegs which are very wet and covered with small spruce and tamarack. Very little timber of any size was found nor were any hay meadows seen. There is an abundance of fresh water in the swampy places between the rocky ridges and in Wanipigow river, which flows through the southwest corner of the township. This stream is about 4 chains wide and very deep, with a sluggish flow. No waterfalls exist in the first 6 or 7 miles of the river, which for this reason makes an excellent highway for the miners and trappers going into the interior of the country by canoe. No summer frosts were noted. Wood is plentiful everywhere. No stone-quarries, lignite, coal nor other minerals have been discovered. Game is plentiful and forms the principal source of revenue of the Indians on Hole Indian reserve. Moose, deer, bears, rabbits and partridges are numerous; of the fur-bearing animals, foxes, minks, martens, otters and muskrats are trapped, and in lake Winnipeg quite a fishing industry is carried on in sturgeon, whitefish and pickerel. This part of the country is very difficult to travel through as no roads nor trails have been opened. In the summer the Indians, trappers and miners travel by canoe on the rivers, and in the winter dog teams are used for travelling and transporting freight.—A. Lighthall, D.L.S., 1913.

(*North outline.*)—The country in this range becomes more swampy and the **80.** jackpine bluffs occur less frequently than in the range to the west. The soil is black muck with gravel and clay loam on the ridges. Although this country might be drained towards Split lake, it would be a very large undertaking. In the easterly half of section 33 we crossed another trial line of the Hudson Bay railway. For information as to minerals, climate and game, see the report on township 80, range 1, west of the Principal meridian.—B. W. Waugh, D.L.S., 1913.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.

(*North outline.*)—In sections 31, 32, 33 and 34, the line runs through swamp,

- 1.** in which the timber, such as cedar, spruce and tamarack, varies in diameter from 4 to 15 inches. The north boundary of sections 35 and 36 runs through a ridge covered with small jackpine.—*J. A. Coté, D.L.S., 1902.*

(*East and south outlines.*)—The southern boundary runs nearly the whole length through an open muskeg. A very short distance to the north there is dry land timbered with poplar. On the eastern boundary the land is marshy, and covered with spruce, cedar and tamarack.—*W. Pearce, D.L.S., 1877.*

(*Subdivision.*)—The greater part of the soil in this township is useless, being only fourth-class and made up principally of floating muskegs and spruce and tamarack swamps. There are, however, about 8 or 10 good quarter-sections in the southwest corner which, when cleared, will make good farming land. The greater part of the land is covered with bush, consisting principally of spruce and tamarack averaging from 3 to 7 inches in diameter, and a considerable amount of spruce and tamarack and willow scrub, especially in the swamps and muskegs. Hay can be had in the southern part of the township, sufficient to supply the settlers. There are no streams of any kind, but good water can be had in the swamps and by digging a few feet in almost any place. The climate is the general Manitoba climate without any indications of summer frosts. Fuel can be had in unlimited quantities all through the district, consisting principally of spruce and tamarack. There are no coal or lignite veins, minerals or stone-quarries. Moose is about the only kind of game to be found. The Canadian Northern railway runs through the northeast corner of the township. It is impossible to reach this, however, from the central or southern part of the township on account of swamps and muskegs. There is a trail leading from the settlements in the township to the west, but even this is difficult to travel on except in winter.—*J. Molloy, D.L.S., 1906.*

(*North outline.*)—Through sections 31 and 32 this runs through swamp covered

- 2.** with spruce and tamarack. Sections 33, 34, 35 and 36, are covered with dry jack pine and poplar. The soil is sandy.—*J. A. Coté, D.L.S., 1902.*

(*East outline.*)—The country along this line has many high sandy ridges, on which there are some fair-sized pine, poplar, spruce and tamarack with willow brush. The land generally is of a third-class quality.—*W. Pearce, D.L.S., 1877.*

(*Subdivision.*)—The greater portion of the soil in this township is a black or sandy loam from 5 to 18 inches deep with a sandy clay subsoil and would be fit for farming purposes if it were not that the land being so wet is almost impossible to reach. All the land is covered with bush consisting mostly of spruce and tamarack from 5 to 10 inches in diameter, and poplar, willow and jackpine scrub, and brûlé equally distributed. The southwest quarter of the township is mostly covered with dry tamarack of about 5 inches in diameter with low willow scrub and swamp. There are no hay meadows, but if the land were cleared and drained hay could be had in large quantities all through the township. All the water is free from alkali and of first-class quality. There are no streams. The climate is the general Manitoba climate with no summer frosts. Fuel can be had in abundance all through this district, consisting of spruce, tamarack, poplar, cedar and jackpine. There are no coal or lignite veins, minerals or stone-quarries. Game, consisting of moose, deer and bears is very plentiful all through this section of country. A winter trail leading to Woodridge, a village on the main line of the Canadian Northern railway about 8 miles to the north, passes through the western portion of the township and continues southeast to the settlement of Pine Valley in township 1, range 12. There is a store, post office and school in both of these places. A branch line of the Canadian Northern railway passes through the southwest corner of the township.—*J. Molloy, D.L.S., 1906.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

(*East and south outlines.*)—The country along these lines is rolling with ridges,

- 3.** small tracts of swamps, and grassy marshes. It is timbered, with the exception of a few prairie openings, with red pine, tamarack, spruce, cedar, poplar and willow. Rat river flows in a westerly direction through section 13.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—In this township, I surveyed the east boundary of section 35, and the north of section 25. These lines run through a spruce and tamarack swamp. The Canadian Northern railway crosses section 36.—*J. A. Coté, D.L.S., 1901.*

(*Northwest quarter.*)—There is a strip of swamp about half a mile in width along the westerly boundary of this quarter; the balance is mostly rolling sand hills interspersed with small swamps. The timber is chiefly small jackpine and poplar, except in the swampy portions, above mentioned, where there is some spruce, tamarack and cedar of fair size. Over half the timber on this quarter of the township has been fire-killed.

(*Northeast quarter.*)—This quarter is of a very broken character, consisting of low sand hills and ridges interspersed with irregular areas of swamp and muskeg. There is some green jackpine and poplar on the ridges, but most of the timber has been fire-killed, and the tamarack in the swamp is very small and scattered.

(*Southeast quarter.*)—Rat river flows southwesterly through this quarter. There is a narrow strip of swampy land along the river and some swamp north of it, although the greater portion of the quarter consists of light, sandy ridges timbered with small poplar and jackpine, nearly all of which has been fire-killed.

(*Southwest quarter.*)—Sand river flows westerly throughout this quarter, and has banks from 20 to 30 feet high in places. There is a high sandy ridge running southerly through the quarter. West of this ridge and along the westerly limit north of the river there is a strip of spruce and tamarack swamp, in which nearly all the timber is fire-killed. Most of the balance is rolling sandy land, sparsely timbered with scrubby jackpine and some poplar, a considerable portion of which is fire-killed.—*W. A. Ducker, D.L.S., 1902.*

The soil in this township is mostly third-class, and the greater part of it is unfit for farming purposes, as it is either sand or shallow sandy loam with a sand or gravel subsoil. There are, however, a few good quarter-sections along Rat river, which crosses the township from east to west. The surface is undulating or rolling, being covered mostly with jackpine, spruce, tamarack, poplar and thick willow scrub, all being equally distributed through the township. The average diameter of the timber is about 7 inches; a good portion of the timber in this township has been cut already, and nearly all that remains has been killed by fire. There is a considerable amount of hay along the banks of Rat river and the small creeks, and in a few small hay sloughs which appear here and there throughout the township. All the water in the creeks and sloughs, and what can be had by digging a few feet, is of excellent quality. The water in Rat river and the creeks remains all the year, and in many places does not freeze. The land is not liable to be flooded. There are no water-powers available. The climate is temperate, without any indications of summer frosts. There are no coal or lignite veins, stone quarries nor minerals. Wood for fuel can be had in unlimited quantity all through this section of country, both dry and green. Moose, jumping deer, wolves, prairie-chickens and bush rabbits are very plentiful. This township is well travelled by trails leading to Pine Valley, Badger and Woodridge. The main line of the Canadian Northern railway passes through the township to the north, where the town of Woodridge is situated, which has a station, post office, church, school and four general stores. Large quantities of wood are shipped from here every year, giving employment to a large number of men.—*J. Molloy, D.L.S., 1904.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

(North outline.)—This boundary is timbered with young red pine from 15 to 20 feet high. There are some small bluffs of spruce and tamarack intermixed with the pine. An occasional open grassy tract is found along this line.—*L. Kennedy, D.L.S., 1873.*

(East outline.)—The country along this line is timbered with spruce, tamarack, poplar, Norway pine and cedar, except in sections 12, 1 and part of 13, which are mostly open prairie. The timber is generally young and small.—*L. Kennedy, D.L.S., 1873.*

(Subdivision.)—The soil in this township is a sandy loam upon a subsoil of sand and clay, and is wooded with spruce, tamarack, poplar and jack pine. In some places where the timber has been fire-killed, there is now a second growth. There are two settlers in this township, one in the southeast quarter of section 10 and the other in the northwest quarter of section 2. The Canadian Northern railway and the Sprague trail cross the southern part of the township. Woodridge station is situated in the southeast quarter of section 10.—*J. A. Coté, D.L.S., 1901.*

The northern part of this township is useless for farming purposes as it is all sand. The surface is undulating or rolling, and a good deal of it is covered with jack pine with some tamarack, spruce and poplar, the average diameter of the timber being about 8 inches; it is equally distributed throughout the township. There is very little hay to be found, except in a few small sloughs. There is very little water in the northern part of the township, but what there is, is of first-class quality. Good water can be had by digging from 20 to 30 feet. There are no water-powers. Wood for fuel can be had in unlimited quantities all through this section of country, both dry and green. The climate is temperate without any indications of summer frosts. There are no coal or lignite veins, stone-quarries nor minerals of any kind. Moose, jumping deer, wolves, prairie-chickens and bush rabbits are very plentiful. The township is well traversed by wood trails all leading to Woodridge, a town situated in section 10 on the main line of the Canadian Northern railway. In this town there is a station, post office, church, school and four general stores. Considerable wood is shipped from here every year, giving employment to a large number of men.—*J. Molloy, D.L.S., 1904.*

(East outline.)—This district is timbered with red pine, spruce, tamarack, 5. poplar, birch and cedar, together with a small quantity of elm and ash. A great deal of the timber is of young growth. The land is of third-class quality.—*L. Kennedy, D.L.S., 1873.*

(Subdivision.)—The greater part of this township is situated on a range of hills known locally as the Cypress mountains, and has a rolling surface with a few deep ravines. Sections 25, 35 and 36 are nearly all spruce and tamarack swamp with a considerable quantity of cedar suitable for fence posts and paving blocks. The swamp has a thick covering of moss overlying a deposit of very wet peaty loam. The soil of the remainder of the township is almost pure sand with a subsoil of sand and gravel in places. The southeast corner has numerous small open marshes fringed with spruce and tamarack. The sandy ridges are densely wooded with jack pine from 6 to 8 inches in diameter, interspersed with large poplar. The balance of the township is sparsely timbered with stunted jack pine, and small spruce and tamarack in the ravines. A large quantity of railway ties have been taken out along the east boundary of the township. There is still considerable tamarack suitable for ties in the swampy portions. With the exception of the cedar the rest of the timber is fit only for fuel.—*W. A. Ducker, D.L.S., 1902.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

The land in this township is almost useless for farming purposes, the soil being a sandy loam up to 3 inches in depth with a sand or gravel subsoil. The surface is mostly rolling or undulating, and the greater part is covered with bush, which consists principally of jack pine up to 6 inches in diameter, with jack pine, poplar and willow scrub. Some spruce, tamarack and cedar is found in the northeastern part of the township. There is very little hay in the township. The water is fresh in all the sloughs, swamps and small creeks, and good water can be had by digging from 16 to 20 feet. There are no water-powers, stone-quarries, coal nor lignite veins. The climate is the general Manitoba climate with no summer-frosts. Wood for fuel, consisting of jack pine, tamarack and spruce, can be had in large quantities, both in this township and all through the surrounding district. Moose, deer and bears are very plentiful. Trails going to Woodridge, a station on the Canadian Northern railway about 7 miles to the south, pass through the western part of the township.—*J. Molloy, D.L.S., 1905.*

(*North outline.*)—The most convenient way to reach this township is from

6. Bedford, a station on the Canadian Northern railway, by the old Mennonite trail, on which travelling will be good any time during the summer season.

A large portion of this township is high and rolling, and the soil is of very poor quality, being light and sandy except in the swamps, which are too wet for cultivation until drained. The greater portion of the surface is sparsely timbered with jack pine and scrub, but the swamps are timbered with spruce and tamarack. Nearly all the large timber of any value has been removed, but there is an abundant supply of timber under 10 inches in diameter for fuel, fencing and small building logs. There are a few small hay meadows scattered over the township. There are no permanent streams but the water on the low lands is generally of good quality. There are no water-powers. There is an abundant supply of fuel scattered over the township. There are no indications of stone-quarries or minerals. Moose, caribou and jumping deer are found, also prairie-chickens, partridges, rabbits and lynxes. The township is of very little value except as a fuel reserve.—*W. A. Ducker, D.L.S., 1903.*

(*North and east outlines.*)—The country along these lines is nearly all swamp, timbered with small spruce, tamarack, red pine and cedar. In some of the drier spots there are clumps of poplar and willow.—*L. Kennedy, D.L.S., 1873.*

(*Subdivision.*)—A range of hills extend northeasterly through the central portion of this township. There is a narrow belt of spruce and tamarack swamp along the central line of the township from east to west. With this exception, this portion is rolling sand hills with a scattered growth of stunted jack pine of little or no value. Sections 18, 19, 30, 31 and 32 on the west side and sections 1, 2, 12, 13 and 24 on the east side of the hills consist almost entirely of spruce and tamarack swamp. There is some good cedar on sections 1 and 2 suitable for posts and paving blocks. Nearly all the remaining timber is small and suitable only for fuel.—*W. A. Ducker, D.L.S., 1902.*

This township is situated about 16 miles northerly from Bedford station, on the main line of the Canadian Northern railway, and is most easily reached by the Mennonite trail from Bedford. This trail passes over a range of low hills, and it is a very good wagon trail. The soil in the higher parts of the township is a light sand mixed with stones and gravel in most places, and is unsuitable for cultivation. The swampy portions are covered with a layer of peaty moss of varying thickness, and generally have a sandy subsoil. They would have to be drained before cultivation could be successfully carried on. The whole of sections 1, 12, 13, 24, 25, 19, 30, 31

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

and 32, the easterly portions of sections 2, 11, 14, 16 and 23, and the westerly portions of sections 20 and 29 are swampy and covered with tamarack and spruce, and are nearly level. The remainder of the township is rolling. A range of low hills runs in a northeasterly and southwesterly direction, beginning at the southwest corner and passing out at the northeast corner of the township. These hills are covered with a sparse growth of small jack pine. About 65 per cent of the township is covered with wood, about 23 per cent with scrub, consisting of jack pine, willow and poplar, and the remaining 12 per cent is either open or semi-open. The timber remaining consists of tamarack, spruce and jack pine and a few cedar trees in sections 1 and 2, nearly all of which are under 10 inches in diameter and not good enough for boards. Railroad ties could be made from the tamarack in sections 25, 24, 15, 12, 1, and 2 in the east and in sections 18, 19, 20, 29, 30, 31 and 32 in the west. The portions of this timber unsuitable for ties could be made into cordwood. Some cordwood could also be cut in sections 17, 16, 15, 14, 11, 10 and 9. A few hay meadows are scattered over the township and they produce a small crop of coarse hay. All the water is fresh and is plentiful and permanent in the swamps, but entirely absent in the higher parts of the township. There are no permanent streams. During the time of survey the climate was good; there were hot days and cool nights with no summer frosts. There was sufficient rain. Fuel, consisting of tamarack, spruce or jack pine, can be procured in abundance in all parts of the township. No coal or lignite veins are known to exist. No exposures of rock-in-place and no valuable economic minerals were seen. Bears and moose are plentiful, and a few traces of deer were seen. Of the smaller game, there are some ruffed grouse, prairie-chickens and a great many rabbits. Timber wolves and coyotes are quite numerous.—*H. S. Holcroft, D.L.S., 1906.*

(*North, south and east outlines.*)—This township is most conveniently

7. reached by the Dawson road from Ste. Anne, the road being very good.

About two-thirds of the soil is very light, sandy and stony, many of the granite boulders being very large. The remainder is generally swampy and useless for cultivation until drained. The upland portion is rolling and generally timbered with jackpine, and the swamps, where not muskeg, are timbered with spruce and tamarack. Nearly all the timber left in the township is under 10 inches in diameter, and suitable only for fuel, fencing and building logs. No hay was seen. Good water is found close to the surface throughout the township. Fuel is abundant. No stone-quarries nor minerals were seen. The township is of very little value except as a timber or fuel reserve.—*W. A. Ducker, D.L.S., 1903.*

(*East outline.*)—The country along this line is timbered with tamarack, spruce and Norway pine; much of which, however, is burnt. There are a number of swamps in which there is a growth of small tamarack.—*J. Johnston, D.L.S., 1872.*

(*Subdivision.*)—This township is most easily reached by the Dawson road from Ste. Anne which passes through sections 33, 34, 35 and 36, or by taking the Sprague trail, which leaves the Dawson road in township 8, range 9, the southerly portion of the township may be reached. Both the Dawson and Sprague roads are fairly good. About two-thirds of this township is of a light sandy and stony soil, very little of which is suitable for agricultural purposes. The remaining one-third is swampy and covered to a considerable depth with a peaty moss, all of which, at present, is too wet for cultivation, and even if drained would be of very little agricultural value. The higher portions are rolling and covered with a sparse growth of jackpine or scrub. The lower portions are very nearly level and are covered with a dense growth of tamarack and spruce. Sections 31, 32, 33, 29, 28, 27, 26, 20, 21, 22, 16 and 6 and the northerly portions of sections 34, 35, 36, 15, 14 and 9 and the easterly portions of sections 19, 18 and 7 and the westerly portions of sections 23 and 25 are covered with

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

jackpine, poplar, balm of Gilead and scrub, with a few small open places. The remainder of the township is covered with a dense growth of tamarack and spruce. About 70 per cent of the surface is timbered about 20 per cent is covered with scrub and the remaining 10 per cent is open or semi-open. Very little timber suitable for lumber is left in this township. In the westerly portion of sections 7, 18, 19 and 30 there are a few trees over 10 inches in diameter. The northern and central portions of the township are covered with small jackpine and some poplar, all of which is small and suitable only for fuel. The southeasterly portion of the township and the westerly parts of sections 7, 18, 19 and 30 are covered with tamarack and spruce, some of which would make railroad ties. The remainder is suitable only for fuel, of which there is a large quantity. Very little hay could be cut. A few small hay meadows are scattered throughout the township, but the growth of grass on these is light and stunted. Water can be obtained near the surface over the whole township, except sections 31, 32, 29 and 17, in which sections it would be necessary to go to some depth for it. The supply would be sufficient and permanent. All the water is fresh. There are no running streams in this township. None of the land is liable to be flooded. No head of water is obtainable in this township. The climate is good; there is sufficient rain, much sunshine and cool nights, and no summer frosts occur. Fuel, consisting of tamarack, spruce, jackpine and some poplar, is plentifully distributed over the whole of the township. No coal or lignite veins were discovered. No stone-in-place was encountered, nor were any minerals of economic value seen. Moose, bears and red deer were plentiful. Prairie-chickens and partridges were found in small numbers. No traces of other game were seen.—*H. S. Holcroft, D.L.S., 1906.*

(*North outline.*)—The country along this line is timbered with red pine, cedar, white birch, balsam, poplar and tamarack. Sections 31, 32 and 33 are mostly muskeg. There is a shallow lake partly in sections 33 and 34.—*J. Johnston, D.L.S., 1871.*

(*East outline.*)—The country along this line is timbered with spruce, red pine, tamarack and cedar. The timber is burnt in a number of places. The soil is generally of first-class quality.—*J. Johnston, D.L.S., 1872.*

(*Subdivision.*)—This township can be most readily reached by the Dawson road from St. Anne on which travelling is good. About two-thirds of the surface is spruce and tamarack swamp, which is too wet for cultivation until drained. The remainder consists of sandy ridges, the soil being very light and stony. The low lands are timbered with spruce and tamarack, and most of the ridges are covered with jackpine, though there are a few open areas. Most of the timber is under 10 inches in diameter, but there is a large amount of good tamarack for fuel. About 20 tons of hay could be cut annually, mostly in sections 12 and 13. There are some small creeks in the northwest part of the township, and good water can be obtained near the surface in almost all parts of the township. No water-powers were seen. Fuel is abundant in all parts of the township, and there is a large amount of good tamarack, principally in the north half. No stone-quarries nor minerals were seen. This township is of little value except for a fuel supply, and is at present too far from a railway to pay for hauling.—*W. A. Ducker, D.L.S., 1903.*

This township is most easily reached from Ste. Anne station by the Dawson road. The travelling on this road is fairly good with the exception of about three-quarters of a mile of corduroy. The whole southwesterly quarter of the township and the westerly part of sections 10 and 15 are composed of sand with boulders in most places. In places the surface is covered with a thin layer of partially decomposed vegetable matter, but this layer is too thin to aid appreciably in enriching the soil. The remainder of the township is covered with a thick layer of peaty moss, in the swamps, and with

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

matted grass roots in the marshes. All of the swamps are too wet to be cultivated until drained. If well drained the swamps and marshes would probably produce the usual vegetables and cereals of the district. The sandy portions are of too light a soil and are too dry to produce much growth. The southwestern portion of the township is rolling. The remainder is nearly level. With the exception of the marshes the whole of the township is wooded or is covered with scrub. Marshes and hay meadows occupy about 10 per cent of the surface. Woods or scrub, mainly woods, cover the remaining 90 per cent. The larger marshes are located in sections 13, 14, 15, 22 and 23, and the northern parts of sections 31, 32 and 33, but very small marshes and hay meadows are located at intervals over all the township. A large broken marsh, covered in many places with scattered willow and scrub tamarack, extends through portions of sections 13, 14, 15, 22, 23 and 24. Located at intervals throughout the remainder of the township, with the above-mentioned exception of the southwest quarter, are many marshes varying from 2 or 3 chains to 15 or 20 chains in width. About 12 per cent of the township is covered with scrub, generally willow or scrub tamarack, spruce, poplar and balm of Gilead, with a small amount of scrub jackpine. The scrub is well distributed over the township. The best of the original timber in this township has been removed, but there yet remains a small quantity of spruce and tamarack that would make boards. Sections 4, 5, 6, 7, 8, 9, 15, 16, 17 and 18 contain practically only jackpine and poplar, all too small for boards. There is a small quantity of cedar averaging about 7 inches in diameter in sections 28, 29, 30, 31, 32 and 33. Tamarack and spruce are well distributed over all the northern and eastern portions of the township, tamarack being the most plentiful. Throughout the township the tamarack would average about 8 inches in diameter and the spruce about 7 inches. There is very little timber over 10 inches in diameter. A portable saw-mill, not at present in use, is in the northwest quarter of section 16. Little hay could at present be cut in this township. In sections 12, 13, 17 and 18 about 10 tons of hay could be cut annually. A few small hay meadows are scattered throughout the township, but these produce only a very small amount of grass suitable for hay. All the water in the township is fresh. In sections 4, 5, 6, 7, 8, 9, 16, 17 and 18 some difficulty might be experienced in getting water in a very dry season, but elsewhere in the township water is permanent and can always be obtained by digging. Windy lake, a small body of fresh water about 60 acres in area, lies in sections 31 and 32, and a part of Oak lake, also containing fresh water, in sections 33 and 34. One small stream of clear water about 3 feet wide and 6 inches deep flows into Windy lake in section 31. This is the only running water in the township. None of the land is liable to be flooded to a serious extent, but a great deal of the lower lands would have to be drained before commencing successful agricultural operations. There is no water-power in this township. The climate during the season of operation was reasonably equable, with the exception of a fairly severe frost on the night of July 30, 1906. Fuel, consisting of tamarack, jack pine, poplar, spruce and balm of Gilead, is abundant in all parts of the township. No coal or lignite veins were encountered. No stone-in-place was encountered, but boulders and stones, mostly granite, are scattered over nearly the whole township, especially in the southwest portion. No minerals of economic value were seen. Moose and bears are quite numerous. A few black partridges and ruffed grouse were seen, also a few traces of deer. No traces of other game were seen.—*H. S. Holcroft, D.L.S., 1906.*

9. (*East outline.*)—The country along this line is timbered with red pine, white birch, balsam, poplar and tamarack.—*J. Johnston, D.L.S. 1871-2.*

(*Subdivision.*)—This township was reached from township 9, range 9, by the old logging trail which crosses sections 7 and 18. It was in excellent condition at the

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RANGE 10.—*Continued.*

time of the survey and extended eastward across the south part of sections 20 and 21 to the southwest corner of section 22. Thence a trail was cut through sections 15, 14 and 12 to the east boundary of the township. The soil is either moss, black loam or sand. The moss occurs in the marshes and is a peaty moss extending over 18 inches in depth. The black loam occurs in the spruce and tamarack muskegs and when drained should be splendid agricultural land. This comprises the largest part of the township. The sand is found associated with the poplar and willow bush and is valueless for agriculture, containing also many stones and boulders. The surface is everywhere covered with bush. The northern half of the township is covered with tamarack and spruce. Sections 18, 17, 16, 9, 8 and 7 are covered with poplar and willow with scattered jack pine and spruce, and the balance of the township with spruce and tamarack. The township has all been cut over, and the buildings of an old mill are still standing in the southwest corner of section 20. There is but very little timber large enough to cut at present, it being nearly all under 10 inches in diameter. It should, however, in a few years grow to a valuable size if not destroyed by fire. A small quantity of marsh grass may be obtained in a hay marsh along the north boundary of section 16 and also in the south part of section 14; also a small amount of blue grass along the banks of Brokenhead river in section 36. A branch of Brokenhead river crosses section 36. Where it leaves the township it is 13 links wide and 3 feet deep and flows at 2 miles per hour. The land is not liable to be flooded. Fresh water of excellent quality is to be found everywhere in the township. No water-power is available. The climate is moderate with no frosts at the time of the survey (July). An abundance of fuel is to be found in the form of dead trees. No stone-quarries or minerals were found. The game consists of bears, moose and deer.—J. L. R. Parsons, D.L.S., 1906.

(*East outline.*)—The country along this line is nearly all a swamp, with
10. spruce, tamarack and balsam timber. There is some Norway pine in section
 25.—J. Johnston, D.L.S., 1871.

(*Subdivision.*)—The southern boundary, with the exception of section 1, runs through a low, swampy country yielding spruce and tamarack, the average of which is about 6 inches in diameter. The surface soil is soft and spongy, being composed mainly of vegetable mould or muck, from 10 to 20 inches deep, resting generally on subsoil of stiff bluish-white clay and gravel. Fully two-thirds of the township, northwards from the southern boundary, is of the above description, with intervals of open muskeg, windfall and brûlé interspersed. In the northern part of the township the dry land is more general. The easterly branch of Brokenhead river enters the southwest quarter of section 1, and flows in a northwesterly direction, leaving the township in section 31; along its course, on either side, are occasional belts of bush, consisting of large spruce, tamarack and birch. There is a ridge running southeasterly through sections 34, 26 and 24, on which there is a growth of jack pine timber of small size.—J. W. Fitzgerald, D.L.S., 1887.

(*East outline.*)—Sections 1, 25 and 36 are swampy with a growth of spruce
11. and tamarack; the remaining three sections are dry in places. The dry patches are timbered with poplar, birch and balsam, in addition to the general growth of spruce and tamarack which prevails throughout. The soil is of second- and third-class quality.—W. Pearce, D.L.S., 1878.

(*Subdivision.*)—A large portion of the easterly half of the township is swampy, though containing limited tracts of firm soil yielding poplar, birch, tamarack and spruce, varying in diameter from 4 to 14 inches. In the dry parts the soil is mostly composed of clay loam and sand, on a subsoil of stiff white clay. In places the sub-

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RANGE 10.—*Continued.*

soil is gravelly and stony, with small boulders. The timber along the eastern and southern sides is of fair marketable average, a large portion of it being suitable for railway ties, cordwood, etc. In the westerly part, especially towards the north, there is a large brûlé which is now being covered by a young growth of spruce, tamarack, poplar and white birch. Of the swamp lands and muskegs, the greater part can, by clearing and drainage, be rendered suitable for cultivation. Peat of an excellent quality is found at many points in the open muskeg.—J. W. Fitzgerald, D.L.S., 1886.

(*North and east outlines.*)—The country along these lines is mostly a swamp

- 12.** covered with spruce and tamarack, with patches of dry land on which there is poplar, birch, balsam and cedar. The land is of second- and third-class quality. A small creek with banks 19 feet high, flows in a northeasterly direction through section 24.—W. Pearce, D.L.S., 1878.

(*Subdivision.*)—A considerable portion of this township is fair land consisting of clay and sandy loam, generally on clay subsoil, but frequently also on gravel, stone and small boulders, which occur only where any perceptible rise in the tableland takes place. A large portion of the township is covered with a growth of tamarack and spruce, the northern half yielding a plentiful supply suitable for railway ties. Poplar and birch grow to a large size, sometimes up to 20 inches in diameter. Here the soil is deep and firm, and is composed of rich clay loam, varying in depth from 8 to 20 inches, and of a most fertile character. The settlers in this township have grown some excellent wheat and oats. Much of the township requires drainage.—J. W. Fitzgerald, D.L.S., 1886.

(*East outline.*)—The surface is covered with a growth of tamarack, spruce,

- 13.** poplar, birch and balsam. There is some elm timber along the banks of the three small creeks which flow in a northeasterly direction through section 36. The land generally is swampy, and is of second- and third-class quality.—W. Pearce, D.L.S., 1878.

(*Subdivision.*)—Much of this township is covered with large poplar, spruce and tamarack, with dense underbrush. The poplar, spruce and tamarack range from 6 to 20 inches in diameter. The soil generally is a clay loam where the clay is firm, but is of a sandy character in the flats and wet places. It varies in depth from 4 to 10 inches, and rests usually on a clay, sand or gravel subsoil.—J. W. Fitzgerald, D.L.S., 1878.

(*East outline.*)—The country along this line is mostly spruce and tamarack

- 14.** swamp, with an occasional dry ridge, on which there is poplar and birch timber. There are six small creeks running in an easterly direction through sections 1 and 12. The land is of second- and third-class quality.—W. Pearce, D.L.S., 1878.

(*Subdivision.*)—This township is crossed by the Lac du Bonnet branch of the Canadian Pacific railway. There is a wood siding in section 28 where J. D. McArthur has a log and wood camp. The Winnipeg Electric Railway company have cleared a right-of-way 1½ chains wide across the township on which they have erected a pole line for the transmission of electrical energy to Winnipeg. A fairly good road has also been made along this right-of-way. The greater part of the township is swamp or sand ridge which at present is unfit for cultivation. There are a few quarter-sections of fairly good land in the northeasterly part of the township and near the Six-mile siding on the railway. The timber is chiefly tamarack and spruce, a great deal of which has been cut out for logs and wood by J. D. McArthur, who has a limit extending over the whole township. On the higher ground, where the timber has not been

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RANGE 10.—*Continued.*

burned off completely, there is some heavy poplar and birch. There are no hay lands, running streams, stone-quarries, minerals nor coal. Game, consisting of rabbits, partridges, prairie-chickens, jumping deer and moose, is plentiful.—*G. H. Watt, D.L.S., 1906.*

- (*East outline.*)—The surface is timbered with spruce, tamarack, balsam, **15.** poplar, birch, ash and elm, except in section 25 and part of 24, which is a muskeg. The land is of second-class quality.—*W. Pearce, D.L.S., 1878.*

(*Subdivision.*)—The southeasterly corner of this township is crossed by the Lac du Bonnet branch of the Canadian Pacific railway, and there is a good sleigh road from Lac du Bonnet station leading to section 25. A large proportion of the township is bog and swamp, but there are some dry ridges. The soil on the ridges is generally fair with sand or clay subsoil, except in the southerly part where the subsoil is stony clay or hardpan. The heavy dead standing and fallen timber and thick underbrush are conditions that will keep settlers out for some time. The timber on the ridges has been poplar, spruce, birch and ash, but the greater part has been fire-killed and a thick growth of underbrush has sprung up. In the swamps and muskegs the timber is tamarack and spruce, mostly small, from 8 inches in diameter down. The largest trees have all been cut and taken out for logs. There are meadows where hay has been cut, but the hay is coarse. The water in the swamps is fresh. There is only one sluggish stream in the eastern part of the township. There is no drainage at present, but the township could be easily drained into Winnipeg river. No minerals, coal or stone of any value were seen. Moose, timber wolves, bears, prairie-chickens and partridges are plentiful.—*G. H. Watt, D.L.S., 1906.*

- (*East outline.*)—This part of the township is nearly all muskeg, with **16.** occasional patches of dry land, on which there is a growth of spruce, tamarack and poplar. Section 36 is a swamp, covered with a growth of small spruce and tamarack.—*W. Pearce, D.L.S., 1878.*

(*Subdivision.*)—This township is situated about 5 miles northwest of Lac du Bonnet, the terminal point of a short branch of the Canadian Pacific railway and is most easily approached by means of a winter road from that place. On account of extensive marshes and swamps in the neighbourhood, the township is more or less difficult of access at any time of the year, except when the swamps are solidly frozen, which does not always occur even in winter, when a great depth of snow falls early in the season. There is nothing in the shape of a travelled highway or even a well opened bush road into this township, the only means of access being over a winter road cut by the party during my survey. This road leads in a northerly direction from Lac du Bonnet into the centre of the township. The soil varies from black muck and peat in the east to sand and boulders in the west and central sections, most of the latter being traversed by a high sandy ridge covered chiefly with jack pine. The greater portion of this township is entirely too wet in its present condition to be suitable for settlement, although when a system of drainage is introduced the greater portion of it will doubtless be found quite suitable for cultivation and the raising of all ordinary farm produce. The central and western sections are occupied by a high gravel ridge, the surface of which is strewn with huge boulders, and is otherwise covered with jackpine forest. The eastern and southern portions are chiefly flat and marshy and too wet in their present condition for cultivation. There is a very considerable amount of jack pine, spruce and tamarack occurring upon the sandy ridge occupying the west central sections of the township but the remainder is wooded with small poplar and tamarack scrub. A considerable amount of marsh hay occurs in the swampy sections of the eastern part although on account of the extremely wet, soft

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

character of the ground upon which it grows it is of little value because access to it is very difficult. No bodies or streams of open water were observed although large quantities of surface water occur everywhere upon the marshy lands to the east and south. No water-power exists in the township. As the city of Winnipeg is only a short distance from the township the climate is very similar in both localities, being comparatively dry with occasional extremes of heat and cold. This does not, however, prevent the successful growing of all the ordinary Canadian cereals. Coal is not known to exist in the locality, but there is abundance of wood in all parts of the township. Several exposures of granite occur in sections 2 and 3 and from these, as well as from enormous boulders scattered over the sandy ridge occupying the central and western sections of the townships it is quite probable that a good quality of building stone may be obtained. No minerals of economic value are known to occur. Several species of large game are very numerous, particularly moose, many fine specimens of which were observed during our survey. A smaller variety of deer, commonly known as jumping deer, is also plentiful while black bears are occasionally met with. Ruffed grouse and spruce-partridge are comparatively common, but few other birds of any description were observed.—J. W. Tyrrell, D.L.S., 1906.

(*North and east outlines.*)—The country along these lines is heavily timbered

17. with poplar, birch, spruce and tamarack, interspersed with a small quantity of balsam. Along the banks of the Winnipeg river there is a very thick under-growth of hazel brush. There are occasional patches of swamp, timbered with spruce and tamarack. The land is of second-class quality. The Winnipeg river flows through sections 25, 36 and 24.—W. Pearce, D.L.S., 1878.

(*Subdivision.*)—This township is situated about 18 miles east of the south end of lake Winnipeg, 30 miles north of the main line of the Canadian Pacific railway and 12 miles northwest of Lac du Bonnet, the terminus of a short branch of that railway. Access to this township is by no means easy, not on account of its remoteness, but on account of it being almost completely hemmed in by wide expanses of muskeg, too soft, unless frozen, to admit of being crossed by wagons or pack horses. It can be reached from Fort Alexander, 12 miles northwest, by what is known as the Fort Alexander trail, which traverses sections 35, 36, 25, 24 and 13, but I found it more convenient to reach the township from Lac du Bonnet, and in doing so had to cut a bush road along the bank of Winnipeg river as far as section 9, township 17, range 11, where we struck the winter road to Fort Alexander and followed it to the east boundary of the township, though this road had also to be recut to admit of the passage of the wagons. Although two weeks were spent in cutting this road, there is still no through summer highway from Lac du Bonnet, as in many places we followed the shore of the river or lake, which would be under water during the earlier part of the summer. The south and west sections of this township may be described generally as swampy, with a soil varying from a half-decomposed moss to a rich black muck. The northeast portion, however, is somewhat higher and the soil is composed chiefly of a light sandy clay of fairly good quality. A large portion of this township, being composed of muskeg, is very flat, but the northeast sections toward Winnipeg river are more rolling, with enormous rock exposures and are generally heavily timbered with white poplar, spruce, balsam, tamarack, ash and birch, while the southwest sections are wooded chiefly with tamarack, black spruce, willow and alder scrub. There is a considerable amount of good spruce and tamarack timber found throughout the eastern half of the township except in sections 2 and 3. The spruce varies in size from about 8 to 24 inches in diameter while tamarack is found as large as 20 inches in diameter. Though of less value white poplar predominates and is occasionally found as large as 20 inches in diameter. There is very little hay land in this township, as it is mostly heavily timbered. A considerable amount of

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 10.—*Continued.*

hay and long coarse grass occur in many of the western sections, but the land is entirely too wet to admit of its being cut. Winnipeg river is the chief water supply of this township. It flows through sections 25 and 26, and is a very large stream. The greater part of the township is very wet which is a great drawback towards its occupation. No water-power exists in this township. There are several falls along Winnipeg river but none within this township. As the city of Winnipeg is only a short distance from this township the climate is very similar in both localities being comparatively dry with occasional extremes both of heat and cold. This does not, however, prevent the successful growing of all the ordinary Canadian cereals. Coal is not known to exist in the locality but there is an abundance of wood in all parts of the township. Enormous exposures of granite occur in some of the northeast sections and although no quarries have yet been opened up it seems quite probable that a fine quality of building stone might be available. No minerals of economic value are known to exist. Several species of large game are very numerous, particularly moose, many fine specimens of which were observed during our survey. A smaller variety of deer, commonly known as jumping deer are also plentiful, and black bears are occasionally met with. Ruffed grouse and spruce-partridge are comparatively common, but few other birds of any description were observed.—*J. W. Tyrrell, D.L.S., 1906.*

This township is densely wooded with poplar, spruce and tamarack. A few **18.** birch trees are scattered through the poplar and they are also found intermixed with the jack pine which is the principal timber on the numerous ridges of rock. The soil in the immediate vicinity of the Winnipeg river and as far back as the edges of the muskegs, is of excellent quality. The muskegs are, as a rule, covered with moss to a depth of 18 inches, under which there is a rich black loam said to be 3 feet in depth. These muskegs can be easily drained at a comparatively small cost. There is an abundance of fish in both the Winnipeg and Maskwa rivers.—*G. McPhillips, D.L.S., 1885.*

RANGE 11.

1. The survey of this township was confined to 14 sections in the easterly half, which alone were considered fit for settlement, as the remainder of the township is mostly swamp. Of the sections surveyed the best land is found in the two sections in the northeast corner and in sections 13, 1 and 2, the remainder being reclaimed swamps, suitable for grazing, or swamp in the original state. The timber in the swamps is barely sufficient for the use of settlers. Poplar is the most prevalent timber in the southern part. There is no timber of any value upon the light sand ridges in the northwest part of the township. These ridges extend in a southwesterly direction across the township. The settled portions are occupied by Norwegian, Icelandic, French and Scotch settlers. The sections surveyed in this township along with those surveyed in the adjoining townships form a block of land equal in area to 1 township and are locally known as "The Settlement."—*C. Carroll, D.L.S., 1900.*

The soil in this township is mostly third-class, although there are a few quarter-sections in the western part which rank as second-class, the soil being a rich black loam with a clay subsoil. All of the land is covered with heavy brush, consisting principally of spruce and tamarack from 5 inches to 10 inches in diameter, with a few small bluffs of pine and poplar averaging about 7 inches in diameter. There is no hay, but in the township to the east a considerable amount can be procured. There are no streams or creeks, but water can be obtained in almost any part of the township either in the swamps or by digging a few feet. The climate is the general Manitoba climate, with no indications of summer frosts. Fuel can be had in unlimited

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

quantities all through this section of country, consisting principally of spruce, tamarack, jack pine and poplar. There are no coal or lignite veins, stone quarries nor minerals. Moose and black bears are almost the only kinds of game in this district. Good trails run from the northern part of this township to the stations of Badger and Vassar to the north, on the main line of the Canadian Northern railway, and to Pine Valley, a station on a branch line of the same railway, which is now being constructed. In all these places there are schools, post offices and small country stores. The branch line of the Canadian Northern railway runs through the northern part of this township.—*J. Molloy, D.L.S., 1906.*

2. The outlines and the four southeasterly sections were the only parts of this township surveyed, as these were the only sections adapted to settlement.

The land in sections 1 and 2 is very good. The remainder of the township is made up of a light, barren sand that will, in my opinion, never become arable land. A few small stunted jack pine are scattered over this area, which has lately been fire-swept. There are two large swamps, one in the northwest portion and one on the east side, just north of the surveyed sections. The timber in these swamps is sufficient only for the use of settlers. The Canadian Northern railway runs a short distance to the south of these sections.—*C. Carroll, D.L.S., 1900.*

Nearly all the land in this township is of third- and fourth-class quality, being mostly sand with about 2 inches of sandy loam which is unfit for producing crops. The land is covered mostly with jackpine scrub about 6 feet high, although there is more heavy bush in the southern portion of the township consisting of jack pine of about 7 inches in diameter and some spruce and tamarack, mostly dry, about 5 inches in diameter. There is very little hay to be found, but it could be obtained in a few places by clearing the bush off. All of the water is of first-class quality, and the supply is sufficient and permanent. It can be had by digging in almost any part of the township, except on the jackpine ridges, where it might be a little difficult to obtain. There are no streams to be found. The climate is the general Manitoba climate, without any summer frosts. Enough fuel for present purposes can be had in the township, and the surrounding townships are well supplied with wood for fuel, consisting of spruce, tamarack, jackpine and cedar. There are no coal or lignite veins, minerals nor stone-quarries to be found. Game, consisting of moose, deer and black bears, is very plentiful all through this section of the country. A good trail passing through the eastern part of the township runs from Badger, a station on the main line of the Canadian Northern railway in section 12 of the township to the north, to the settlement of Pine Valley in section 30, township 1, range 12, through which a branch line of the same railway runs. There is a post office and store in both these places, as well as a school at the settlement of Pine Valley.—*J. Molloy, D.L.S., 1906.*

3. The soil in the northeast quarter of this township is a black loam with a sandy subsoil and is covered with fire-killed poplar and heavy underbrush.

The remainder of the township is sandy. The Rat river runs southwesterly across sections 33, 32, 29, 20, 19 and 18. The Canadian Northern railway crosses sections 31, 32, 29, 28, 21, 22, 15, 14, 11 and 12. Along the north, east, and south boundaries the soil is sandy and is covered with jack pine.—*J. A. Coté, D.L.S., 1901.*

(Northwest quarter.)—There is some swamp and small dead tamarack along the westerly boundary of this quarter, although the greater portion of it is undulating to rolling, and partially timbered with small jack pine and poplar, fully three-fourths of which is fire-killed. (Northeast quarter.)—This quarter is undulating to rolling. There is a little spruce and tamarack swamp in the northeast corner, the remainder being sparsely timbered with dead jack pine and some poplar. The soil is almost pure sand.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

(*Southeast quarter.*)—This quarter is undulating to rolling, and sparsely timbered with dead jack pine and poplar. There is still a little green jack pine on the southeast corner. The soil is very light and sandy. (*Southwest quarter.*)—This quarter is undulating to slightly rolling, with small areas of low land, partially covered with red willow, the timber consists of small jack pine and poplar, almost all of which has been fire-killed. The Canadian Northern railway crosses the township in a southeasterly direction from the west boundary of section 31 to the east boundary of section 12.—W. A. Ducker, *D.L.S.*, 1902.

The greater part of the soil in this township is unfit for grain-growing purposes, it being principally sand and light sandy loam with a sandy clay subsoil; a few quarter-sections in the southwestern part, however, could be used for farming purposes, the soil being a black loam with clay subsoil. The greater portion of the township is covered with bush or scrub, jack pine, spruce, poplar and thick willow scrub being equally distributed. The average diameter is about 6 inches. The land is either undulating or gently rolling. There is a considerable quantity of hay in sloughs distributed over the township, but there are no very large hay meadows. There are a few small creeks which contain excellent water all the year round. The creeks are from 3 to 5 feet wide and about 3 feet deep. There are no water-powers. Fuel can be had in large quantities both in this township and in the other townships in the district. There are no minerals, stone suitable for quarrying nor coal or lignite veins to be found. Moose and deer are very plentiful in this district, as well as prairie-chickens and partridges. The main line of the Canadian Northern railway passes through the township, entering at the northwest corner, and leaving at the southeast corner. Trails cross the township in all directions running from Badger and Woodridge to different stations along the railway. Woodridge, a station on the railway in section 10, township 4, range 10, has a post office, four stores, a school and a church. A large amount of wood is shipped from all these points, giving employment to all the settlers.—J. Molloy, *D.L.S.*, 1904.

(*North outline*)—The country is rolling and covered with mixed timber of
4. small dimensions, jack pine being the most prevalent. The soil is generally light.—J. L. Cote, *D.L.S.*, 1898.

(*Subdivision.*)—The northern half of this township is the only part fit for settlement, the remainder being very sandy. There is a small creek of good water about 3 feet deep running northeasterly across sections 20, 21, 22, 27, 26 and 35. The soil is of first-class quality except in sections 19, 30 and 31 which are very swampy and covered with spruce and tamarack of an average diameter of 8 inches. The remainder of the township is covered with spruce, poplar and heavy underbrush. The timber is partly fire-killed. About a year ago a saw-mill was built for the convenience of the settlers.—J. A. Cote, *D.L.S.*, 1901.

There is very little land in the south half of this township that would be fit for farming purposes as it is nearly all sand. The greater part of the township is covered with spruce, tamarack, jack pine and poplar, the average diameter being about 8 inches. There is very little prairie. The land is mostly rolling or undulating. There are a few large hay meadows in the southwestern part of the township, which produce considerable hay when the rains are not too heavy. The water in the swamps and sloughs is of first-class quality and good water can be found by digging a few feet. There are no water-powers. Wood can be had in large quantities all through this district, consisting principally of spruce, tamarack, jack pine and poplar. There are no coal or lignite veins, stone-quarries nor minerals. Moose, deer and black bears are the principal kinds of game. The main line of the Canadian Northern railway passes through the township to the south. Trails are numerous in all parts, running to the stations along the line of railway.—J. Molloy, *D.L.S.*, 1904.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

5. The greater part of the land in this township is not desirable for farming purposes at present, as it is covered mostly with heavy bush, and in many places there is tamarack and spruce swamps with considerable muskēg in the northeastern portion which is partly covered with bluffs of tamarack about 3 inches in diameter. A great deal of this part is almost impassable, except where the tamarack bluffs are, on account of it being a floating bog. The soil, however, is mostly a black loam. There are a few good quarter-sections on the southwestern part of the township which are mostly covered with poplar and thick willow and poplar scrub. Nearly all the land is level. The tamarack and spruce vary in size from 3 to 15 inches in diameter and are found principally in the northwest and southeast quarters of the township. The east half of section 16 and the southern part of sections 2 and 3 are about the only places where hay can be obtained. The water, which can be had in large quantities, in almost any part of the township is of first-class quality. The land is not liable to be flooded, but in rainy weather the swamps are mostly covered with water. A number of small creeks are found in the township and one, somewhat larger than the rest, passes through the southwestern part. The water in all the creeks is first-class. There are no water-powers, stone-quarries, coal nor lignite veins to be found in the township. Wood for fuel can be had in large quantities, and in all the townships adjacent, consisting of jack pine, poplar, spruce and tamarack. Moose, deer, caribou and black bears are very plentiful. A trail leaving the township in section 3 goes to Woodridge, a station on the Canadian Northern railway, where there are stores, schools, a post office and a church.—*J. Molloy, D.L.S., 1905.*

6. (*North outline.*)—Only the northern boundary of this township has been surveyed. The eastern 5 miles of this line is located on rolling sandy land, about half to two-thirds of which is timbered with jack pine up to 8 inches in diameter. The northerly boundary of section 31 is occupied by a spruce and tamarack swamp, in which the timber varies in diameter from scrub to 8 inches in diameter. There is a portable saw-mill near the south boundary of section 32.—*W. A. Ducker, D. L.S., 1905.*

(*Subdivision.*)—The soil in this township if it were dry would be nearly all black loam, but as all the township with the exception of parts of sections 35, 34, 33, 27 and 28, which are sandy, consists of tamarack muskeg and almost impassable floating bog, the soil is thereby rendered useless. The greater part of the township is covered with bush except the southeastern part, which consists largely of floating bog with a low willow scrub. The timber varies from 3 to 10 inches in diameter and consists of tamarack, with the exception of a small quantity of jack pine in the northeastern corner. There are no hay sloughs in the township, and very little hay to be had in this district. Water can be had in any part of the township without digging, and at any time of the year. There are no streams or creeks of any kind. The climate is the general Manitoba climate without any indications of summer frosts. Fuel can be had all through this district, consisting principally of tamarack and spruce. No stone-quarries, coal or lignite veins nor minerals were found. Black bears and moose are very plentiful all through this section of country and are about the only kind of game to be found. A trail leading to Woodridge and Ste. Anne passes through the township to the west, and is always in good condition, being along the sand ridges, but it is impossible to get a team or wagon into this township in summer. We were, therefore, obliged to pack all our tents and provisions into the township from section 24 of the township to the west.—*J. Molloy, D.L.S., 1906.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

(South outline.)—In the vicinity of this boundary the surface is chiefly rolling with ridges of very light, sandy soil. A portion of this country has been covered with pitch-pine which was destroyed by fire several years ago, and is now covered with a dense growth of pitch-pine brush. There are some patches of cedar of fair size and quality, but of no great extent.—W. Pearce, D.L.S., 1875.

(Subdivision).—The surface of the township is level to rolling. The Dawson road crosses it in a southeasterly direction, and a trail, known as the Mennonite road, runs southerly from the Dawson road and crosses the southwestern portion of the township. The Dawson road is located on a sandy ridge from a quarter to a half mile in width. There is another sandy ridge occupying a little more than the southerly halves of sections 2 to 6. The remainder is nearly all spruce and tamarack swamps. Whitemouth river enters the township at the southeast corner of section 13 and leaves in section 36. This river has an average width of about 1 chain, and a fairly rapid current in places, but was so firmly frozen over at the time of survey that it is difficult to give any estimate of its volume. The banks are 12 to 40 feet in height, and water-powers could be developed by damming, but the flow of the river is so small at certain seasons that they would be of very little practical value. There is a little soil of fair quality along Whitemouth river timbered with poplar, birch and spruce, but most of the soil on the dry land is very light and sandy while the swamps are moss and peat, of no value for agriculture unless drained. About three-quarters of the township is timbered with spruce and tamarack with jack pine on the ridges. Very few trees are over 8 inches in diameter. No hay land was seen. The water is of good quality and abundant. No stone-quarries were seen but part of the land along the Dawson road, near Whitemouth river, is thickly strewn with large granite boulders. No minerals occur. Moose and spruce-partridges are fairly numerous. The township is of very little value except for its fuel timber.—W. A. Ducker, D.L.S., 1905.

This township may be most conveniently reached by wagon road from Ste. Anne, a station on the Canadian Northern railway, from which place it is distant only about 25 miles. The road leading from Ste. Anne is that known as the old "Dawson road" and is well travelled as far as Brokenhead river, a distance of 16 miles. The township may also be reached by a wagon road from Bedford, another station on the same railway, and the distance is considerably less from this point, though Ste. Anne is the preferable supply station. The soil of this township is composed chiefly of sand on the higher portions and black muck or peat in the swamps, and almost the entire township is underlaid by sand, in some places mixed with gravel. With the exception of Whitemouth river, which flows northerly through the eastern part of the township, no water was found upon the surface during the time of the survey, but anywhere throughout the township good water could be obtained by digging to a depth of from 3 to 6 feet. The higher portions of the township, being composed entirely of sand, are of little value, unless perhaps for the raising of potatoes, but the swamps when drained will probably be suited to general agriculture. Almost the entire surface is covered by a growth of scrubby timber, no prairie of any account being found. The timber is of comparatively little value, small black spruce predominating in the swamps and jack pine on the sand ridges. A few tamarack are found sufficiently large for milling, and some good-sized white poplar occur, but as the greater portion of the township had been visited by fire not many years ago the existing forest is mostly young and the small trees formed into thickets of poplar, spruce and tamarack. The jack pine does not seem to have been affected to the same extent as the other trees by the fire, and is therefore found of larger size, but because of its stunted, gnarly nature is unsuited for the manufacture of lumber. Some marsh hay is found in various sections of this township, notably sections 7, 8, 9, 15, 16, 17, 18, 19,

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

20, 21, 28, 29, 30, 32 and 33. It is of the quality commonly found in sloughs and marshes and when cut in proper season makes good feed for horses or cattle. Whitemouth river affords the chief surface supply of water in this township, and it contains good fresh water. Good water may, however, be found almost any place by sinking wells to a depth of a very few feet. For our own use we usually found an abundant supply at a depth of about 3 feet, and never found it necessary to go deeper than 7 feet. The water level might, however, vary very considerably during different years and seasons, the present year having been a very dry one. Whitemouth river, which in this township has an average current of only about 1 mile an hour and is quite small, is not capable of furnishing any significant water-power. The locality of this township being so near Winnipeg, the climatic conditions are similar and are, therefore, on record at the meteorological office. This township being thickly wooded with various kinds of timber, there is an abundant local fuel supply. No coal nor other mineral are known to exist in the locality. No stone-quarries were found. Large game, particularly moose, were observed to be common in this township and vicinity. Jumping deer, black bears, lynxes, wildcats, foxes and porcupines were also met with and are common in the locality. Few water-fowls were observed, but prairie-chickens, ruffed grouse and spruce-partridges were common. Whitefish, pike and pickerel are found in Whitemouth river.—*J. W. Tyrrell, D.L.S., 1906.*

(*North outline.*)—This boundary is mostly all swamp or muskeg, and timbered here and there with small spruce, tamarack and cedar. In sections 35 and 36 there is some fairly good land wooded with large poplar, cedar, tamarack, spruce and birch.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—Most of the south half of this township consists of sandy ridges with scattered clumps of jack pine and poplar; and the greater part of the north half is spruce and tamarack swamp. The soil on the ridges is very light and sandy and of little or no value for agricultural purposes, while the soil of the swampy portion is chiefly moss and peat, too wet for cultivation unless drained. Nearly all the timber is under 8 inches in diameter and of very little value except for fuel, of which there is an abundant supply. No hay was seen. The water is good and very easily obtained. No water-powers occur. No stone-quarries nor minerals are found. Moose and spruce-partridges are fairly plentiful. The township is of very little value except for its fuel timber.—*W. A. Ducker, D.L.S., 1905.*

This township may be most conveniently reached by wagon road from Ste. Anne, a station on the Canadian Northern railway, from which place it is distant only about 25 miles. The road leading from Ste. Anne is that known as the old 'Dawson road' and is well travelled as far as Brokenhead river—a distance of 16 miles. The township may also be reached by a wagon road from Bedford, another station on the same railway, and the distance is slightly less from this point, though Ste. Anne is the preferable supply station. The soil of this township is composed chiefly of sand on the higher portions and black muck or peat in the swamps, and almost the entire township is underlaid with sand, in some places mixed with gravel. The sandy sections of the township are of little value unless perhaps for the raising of potatoes, but the swampy lands being composed of a rich black muck, will, when drained, probably be suited for general agriculture. Almost the entire surface of this township is covered with a thick growth of small timber, only 2 or 3 small prairie spots having been found. The timber of this township is of comparatively little value, being small and unsuited for milling with the exception of a few scattered tamarack. The abundance of the various trees is represented by the order in which they are named: black spruce, white poplar, jack-pine, tamarack, balsam, willow, cedar, birch and alder. The greater part of the township has evidently been swept by fire not many years ago, causing the existing forest

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

trees to be young and small. The amount of natural hay growing upon this township is small, but meadows were noted upon the following sections: 1, 2, 3, 4, 9, 10, 11, 12, 14, 15, 16, 22, 27, 28, 31 and 32. The quality is that of the ordinary marsh hay, which when cut in proper season makes fairly good fodder. This township contains no surface supply of water other than that found in the marshes, but by the sinking of wells plenty of good water may be obtained from the underlying sand and gravel beds. The amount of water in the marshes, and also the depth of the water-level in the soil no doubt varies very much from season to season and from year to year. There are no water-powers. The locality of this township being so near to Winnipeg, the climatic conditions are similar—very cold in winter and hot in summer, and subject to very sudden changes. No summer frosts were experienced. Fuel in the form of various kinds of timber is abundant throughout the whole district. No stone-quarries were seen. No minerals are known to exist in this township. Large game, particularly moose, was observed to be common in this vicinity. Jumping deer, black bears, lynxes, wildcats, foxes and porcupines were also met with and are common in the locality. Few water-fowls were observed, but ruffed grouse and spruce-partridges were plentiful and a few prairie-chickens were seen. Whitefish, pickerel and pike are found in Whitemouth river in the townships to the south and east.—*J. W. Tyrrell, D.L.S., 1906.*

This township was reached by my own trail from township 9, range 11, which

9. enters the township in section 7; thence runs northerly to section 18, thence

easterly and northeasterly to the northeast corner of section 17; thence easterly along the north boundaries of sections 16 and 15 to its end, 20 chains west of the northeast corner of section 15. The soil in this township is sand, black loam and moss, the sand (with boulders), occurring in the parts timbered with poplar and willow; the black loam in the spruce and tamarack muskegs and moss in the very wet muskegs. At present the soil is of no use whatever, but if the country can be drained, the areas of black loam should prove to be very rich lands. The surface is everywhere wooded, except a large open muskeg comprising section 25, east half section 26, northeast quarter section 23 and north half of section 24. The timber is very much mixed in this township, the marshes and muskegs (covered with spruce and tamarack) being separated by many small sand ridges supporting poplar and willow. There is no timber over 10 inches in diameter, except that in a small area in the east part of section 1 and the southeast quarter of section 12 which contains some good tamarack, spruce and cedar. This, however, was cut over a number of years ago and the best of it taken out. A small amount of blue grass occurs on the banks of the branch of Brokenhead river which crosses sections 16, 17, 20, 29 and 30. Water of excellent quality is everywhere abundant. The branch of Brokenhead river which crosses the township has an average width of 20 links, a depth of $1\frac{1}{2}$ feet and flows $1\frac{1}{2}$ miles per hour. Its water is fresh. It runs in a well defined valley and the land is not liable to be flooded. The creek-bed is a little below the general level of the township and could be used to drain the land in the immediate vicinity. No water-power is available. The climate is moderate, with no summer frosts at the time of the survey (July). Fuel is everywhere plentiful in the form of dead trees. There are no stone-quarries or minerals. The game consists of moose and bears.—*J. L. R. Parsons, D.L.S., 1906.*

This township can be reached very readily in winter by a trail from White-

10. mouth station, on the Canadian Pacific Railway, to the northeastern corner of the township, but in summer this is impassable. It is necessary to go along the bank of Whitemouth river for a considerable distance and then turn westward into the township. A part of this trail is very wet. The soil is of fair quality,

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

and, where not too wet, is well adapted for mixed farming. The high ground is generally scrubby except in the northeastern part, where there is some large poplar. The southern and western parts are swampy and are covered with spruce and tamarack, usually of poor quality. Water of good quality and in sufficient quantities can be obtained by digging from 4 to 10 feet. There is only one small creek, about 4 feet wide and 2 feet deep. The current is not very strong. There is no considerable amount of land liable to be flooded. There are no falls or rapids from which to develop water-power. The climate seems to be more moist and less liable to extremes of temperature than the prairie sections. Frosts are common in spring, but not in the after part of the season. Wild hay of good quality is found in small meadows all over the township, chiefly in sections 24, 23 and 26, but the total amount is not large. There is an abundance of wood for fuel in nearly every part of the township, and in the south and west are extensive beds of peat, which would make excellent fuel if properly prepared. No trace of coal of any kind was seen. There are no stone-quarries. No minerals of any kind were found in the township. Moose in considerable numbers were seen, also a few lynxes, foxes, coyotes, rabbits and partridges.—A. S. Weekes, D.L.S., 1904.

Nearly all of this township is swamp, with a growth of spruce and tamarack.

11. A few small patches of poplar and birch are met with. Where tamarack predominates the country usually is wet and covered with willows. The tamarack averages in diameter from 5 to 6 inches, the spruce probably a little more. When poplar and birch occur the soil is sandy loam on clay subsoil, comparatively dry and ready for cultivation. In the swamp there is generally about 14 to 20 inches in depth of muck composed of moss and moist vegetable matter of clay and decayed mould. Whitemouth river, which flows through this township, is a winding stream about 2 chains wide. Its average depth is probably 4 feet. The banks are clay, holding small boulders, at a few points up to 10 feet high, but generally sloping to the river side. If the timber was cut off and the township properly drained a large part of it might be profitably cultivated.—J. W. Fitzgerald, D.L.S., 1889.

The surface generally is level, and covered with spruce and poplar, most of

12. which, however, is burnt. There are a number of shallow muskegs. The soil is of good quality. Whitemouth river traverses the township from the southeastern to the northwestern corner.—J. W. Fitzgerald, D.L.S., 1888.

The township is intersected by the Winnipeg and Whitemouth rivers, which **13.** form a junction in section 33. The township is generally level, but gullies are not infrequent. The timber is chiefly spruce, tamarack, birch and poplar. Muskegs occupy a large area, they are covered generally with small spruce and tamarack, and in places dense alder, underbrush and willows. The bottom is stiff blue clay, varying in depth from 2 to 20 feet. The surface as usual is composed of springy wet moss, roots, etc. The uplands or ridges are covered with large spruce, running up to 50 inches in diameter, with branches to the ground. Spruce, poplar, white birch and tamarack from 10 to 12 inches in diameter are also found on these ridges. The surface soil is generally a sandy loam. Large granite boulders are often met with. Whitemouth river averages about 2 chains wide; after it passes through section 16 it begins to widen gradually to 8 chains at its mouth. Its average depth is about 3 feet, with a current of probably 2 miles an hour, except in freshets, when it is considerably greater. The banks are low and generally covered with a thick growth of willows. Rapids and boulders are numerous. A tract of spruce timber suitable for the manufacture of good lumber lies on the right bank of the river, from the north boundary of section 10 to the Winnipeg river. The latter river averages about 30 chains wide, with almost a continuous series of rapids, and an average current of about 4 miles an hour. Its shores are high and rocky.—J. W. Fitzgerald, D.L.S., 1888.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

The township is intersected by the Winnipeg river which enters it in section 4, and flows nearly due north, leaving it in section 32. Though broken in some places by gullies and ravines of from 20 to 60 feet in depth, and averaging 2 to 3 chains in width, the township is generally a flat or nearly level surface. The timber consists chiefly of spruce, tamarack, poplar and white birch, with dense underbrush of alder, willows and maple scrub. The spruce is pretty heavy and of fair quality. The soil on the dry lands is sandy and clay loam, 8 to 10 inches in depth on blue clay subsoil. In the low lands the muck runs from 1 to 10 feet in depth and rests on blue clay.—*J. W. Fitzgerald, D.L.S., 1888.*

The township is generally flat, though in a few places partly broken by narrow gullies and hills. The Winnipeg river flows in a northeasterly direction through the township and varies in width from 10 to 100 chains; its shores are generally bold and rocky. The timber consists of spruce, tamarack, birch and poplar, with a few scattered oak. The spruce is fairly well adapted to lumbering purposes. The soil generally is of second- and third-class quality.—*J. W. Fitzgerald, D.L.S., 1888.*

The western portion of the township is level and swampy for a mile east of the western boundary; the balance is gently undulating. A few rocks of from 20 to 40 feet in height are met with on the eastern and northern portions, which portions are covered with small red pine averaging 4 to 8 inches in diameter. The remainder of the township is thickly timbered with spruce, tamarack, balsam, poplar, birch and willow. Oak and elm were seen along the banks of the Winnipeg river. The best part of the merchantable timber was cut some years ago. The soil is generally a good black loam of an average depth of 4 inches, with a clay subsoil. Lac du Bonnet abounds in fish.—*P. C. T. Dumais, D.L.S., 1888.*

This township is generally level or gently undulating. Here and there are many rocky exposures of a few acres in extent, varying in height from 15 to 60 feet, especially on the right bank of the Winnipeg river, where they are rather numerous. The soil is of a very good quality, being a black loam with a clay subsoil. The township is entirely covered with heavy timber, consisting of spruce, balsam, poplar, birch, oak and elm from 10 to 38 inches in diameter.—*P. C. T. Dumais, D.L.S., 1888.*

This township is generally level, but numerous projecting rocks make its general aspect broken. Besides the rocks, which occupy about 20 per cent of the surface, a good deal is muskeg or swamp covered with dense, black willow scrub and black spruce of small size but generally long and good for fence rails. The remainder is good, first-class soil composed of black loam with a clay subsoil, and is well timbered with spruce, poplar and scattered tamarack from 10 to 15 inches in diameter. However, along the margin of the rocks there is plenty of tamarack of large size suitable for any requirement of the market, especially for piles and ties. There is a small stream, a tributary of Maskwa river, which crosses the township in a southwesterly direction through sections 24, 14 and 10, and from this last section in a northeasterly and north direction through sections 16, 17, 18 and 20, with an average width of 25 feet and an average depth of 3 feet. It is good for driving logs but numerous dead trees are jammed here and there which render the driving difficult. There is another stream, about the same size, which crosses section 1 in a southwesterly direction and empties into the Winnipeg river. The water in this river comes from muskegs and is black, but good to drink. On both sides of these rivers

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 11.—*Continued.*

lie splendid belts of white spruce, and here and there in the small valleys are seen elm and ash fit for the settlers' use. With the exception of the southeast quarter of section 6 this township is unfit for farming; nevertheless there are many good pieces of land which rank as first-class, but are interspersed with muskegs and rocks which render them inaccessible to settlers in summer time. This township should be reserved for a timber limit.—*A. Bourgeault, D.L.S., 1908.*

RANGE 12.

This survey was confined to the 12 westerly sections and sections 4 and 33,

- 1.** the rest of the township being considered unfit for settlement on account of the wet nature of the country. It would not be practicable at the present time to attempt the reclaiming of this land by drainage. The soil in the northeast part of the township is a light, almost barren sand which formerly bore a moderate quantity of fairly good-sized pine trees, but they have been destroyed by fire as is shown by the remaining charred and blackened stumps. The second growth is of stunted jackpine exclusively. The remainder of the township is practically all swamp bearing principally tamarack and a few cedars. Over the fire-swept district the land has become dry enough for the growth of grass and as a result of this it has been largely occupied, chiefly by Norwegians and Icelanders; there are also a few French and Scotch settlers. The chief occupation of these settlers is cattle-raising, as the land is most suitable for grazing. Good wheat and vegetables are produced in small quantities. Judging from the influx of settlers all the available land will soon be settled upon. There is one general store in the settled part which is only a few miles from Vassar, a station on the Canadian Northern railway. No doubt schools and churches will be erected in the near future.—*C. Carroll, D.L.S., 1900.*

The eastern part of this township is unfit for farming purposes, the soil being of a very sandy nature. In the central part where spruce and tamarack swamps prevail, the soil is black loam and will produce all kinds of farm produce, when the land is cleared and cultivated. The surface is principally covered with timber, the eastern part with jackpine and the centre with tamarack and spruce. There is very little scrub. In the eastern part the jackpine is from 3 to 6 inches in diameter and in the central part the spruce and tamarack varies from 4 to 8 inches in diameter. There is very little hay to be found in this township. The water is fresh; permanent water can be had by digging from 12 to 15 feet. Only one small stream was encountered. The land is not liable to be flooded. There are no water-powers. The climate is the general Manitoba climate. No frosts occur. Fuel can be had in the district, consisting of jackpine, spruce and tamarack. No coal or lignite veins, stone-quarries nor minerals were found. Moose, black bears, jumping deer and prairie-chickens are very plentiful. The Canadian Northern railway passes through the township to the north. Vassar station is situated on section 6, township 2, range 13, where there is a post office and store. The Sprague trail, running from Winnipeg to Sprague, and the Vassar and Pine Valley trail, pass through the township.—*J. Molloy, D.L.S., 1905.*

The northeast corner and part of the south side of this township is covered

- 2.** with swamp, the timber in which is scarce and of no great value, being merely sufficient for fence rails, posts and house logs for settlers' use, for whom it should be reserved. The soil of the rest of the township is a light sand, the timber on which has been destroyed by fire. A very poor second growth of jackpine has sprung up and this also has been partially burned. That which remains seldom exceeds a

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RANGE 12.—*Continued.*

height of 8 feet or a diameter of 2 inches. In the southwest corner, around the head-water of Pine creek, there is a quantity of arable land; this covers approximately 4 sections, which we surveyed. The rest of the township is unfit for settlement. The arable land is especially adapted to stock-raising. There are some sandy ridges in this township which will never be of any use. When the timber has been removed from some of the swamps in the southwest portion of the township it would be possible by drainage to convert them into good grazing land. The chief timber in the swamps is tamarack, except in the fire-swept districts where spruce, balm of Gilead and an occasional birch are found. On account of the swampy nature of the country to the north and west of the area surveyed the trail through it is very difficult for teams to travel.—*C. Carroll, D.L.S., 1900.*

The land in this township is nearly all third-class, being mostly sandy soil with a sandy or gravel subsoil and not very suitable for farming purposes. The greater part of this township is covered with bush and scrub, except on the open sand ridges. In the southwestern part there is some spruce and tamarack swamps. The timber varies in size from 3 to 12 inches in diameter. There is very little hay to be found except in a few small sloughs. The water is all fresh and of first-class quality and can be had in large quantities all through the township, except on the sand ridges. A few small creeks are to be found which have good water. The land is not liable to be flooded. There are no water-powers. Fuel can be had in large quantities all through the township and in the adjoining township, consisting principally of spruce, tamarack and jackpine. There are no stone-quarries, coal nor lignite veins nor minerals of any kind. The game consists principally of moose, deer and black bears. Trails pass through the township leading to Badger and Vassar stations on the Canadian Northern railway, where there are a few small stores and post offices.—*J. Molloy, D.L.S., 1905.*

The soil in this township is nearly all third- and fourth-class, as it consists principally of sand with a sandy or gravel subsoil. It is almost useless for farming purposes. Nearly all the surface is covered with bush and scrub consisting principally of jackpine, spruce and tamarack from 2 inches to 8 inches in diameter. There is scarcely any hay to be found. The water is all of first-class quality, and is very plentiful in the swamps, but is difficult to get, even by digging, on the sand ridges. The land is not liable to be flooded. Fuel is very plentiful all through this district, consisting principally of jackpine, spruce and tamarack. There are no stone-quarries, coal or lignite veins nor minerals to be found. The principal game is black bears, moose and deer. The township is well traversed with trails running to Pine Valley to the south, where there is a large settlement, and to the stations of Vassar and Badger on the main line of the Canadian Northern railway, which passes through the northern part of the township. There are small stores and post offices in these places, but no schools.—*J. Molloy, D.L.S., 1906.*

3. The surface of this township is undulating to hilly. There is very little timber in the west half. The east half is partially timbered with jackpine and poplar, and there is a considerable area of spruce and tamarack swamp on the east side. Except in this swamp, the soil is very light and sandy. The timber in the swamp is mostly of small size, suitable for fuel. A small branch of Whitemouth river flows northerly through the northeast quarter. Badger, a station on the Canadian Northern railway, is situated in section 6, and a trail from here runs northeasterly to Whitemouth lake.—*W. A. Ducker, D.L.S., 1902.*

The soil in this township is entirely third-class, being nearly all sandy, with a sand or gravel subsoil, and would not be suitable for grain-growing purposes. It is mostly covered with timber, consisting of jackpine, spruce, tamarack and scrub. The spruce

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RANGE 12.—*Continued.*

and tamarack are to be found in the southeastern part of the township. The timber varies in size from 4 to 12 inches in diameter. There is very little hay to be found, except in a few small hay sloughs. The water is of first-class quality and can be had by digging in almost any place. The land is not liable to be flooded. There are no water-powers. Fuel in large quantities, consisting of spruce, tamarack and jackpine, can be found in all parts of the township. There are no stone-quarries, coal nor lignite veins nor other minerals to be found. The game consists principally of moose, deer and black bears. Trails pass through the township leading to Badger, a station on the Canadian Northern railway, where there are a few small stores and a post office.—*J. Molloy, D.L.S., 1905.*

The northern part of this township is almost useless for farming purposes, as it consists mostly of sand ridges and swamps. The soil in the swamps is a black loam and would be good agricultural land if cleared and drained. The surface is mostly heavily timbered, the eastern part being covered with spruce and tamarack from 3 inches to 8 inches in diameter, and the western part with jackpine from 2 to 8 inches in diameter. All the water is of first-class quality, and is plentiful, especially in the swamps, where it can be had at any time of the year without digging. There are no water-powers. The climate is the general Manitoba climate, with no indications of summer frosts. Fuel is very plentiful all through this section of country, consisting principally of spruce, tamarack and jackpine. There are no coal or lignite veins, stone-quarries nor minerals. Game, consisting of bears, moose and deer, is very plentiful all through the district. The main line of the Canadian Northern railway passes through section 6, where the station of Badger is situated. At Badger there is a store and post office. The township is well crossed with trails running to the line of railway, which have been used for hauling out wood and lumber.—*J. Molloy, D.L.S., 1906.*

4. (*North outline.*)—Thick cedar and tamarack swamps prevail.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—A well-defined sandy ridge crosses this township from section 13 in a westerly direction. The trail from Whitemouth lake to Woodridge is located along this ridge. North of the ridge the country is chiefly very wet spruce and tamarack swamp, of no use for settlement, while to the south the land is more undulating, and timbered with poplar, jackpine, spruce and tamarack on the lower land, though there is a good deal of brûlé, especially in the southwest portion. The soil of this portion varies from sand to sandy loam on a subsoil of sand or sandy clay, and portions will be found fairly well suited for cultivation. There is an abundance of timber suitable for building logs, fuel and fencing.—*W. A. Ducker, D.L.S., 1902.*

The soil in this township is mostly second- or third-class, and the greater part of it will be suitable for farming or grazing when cleared and drained. The soil is a sandy or black loam with a clay subsoil. The greater part of the township is covered with heavy bush, consisting of spruce, tamarack, poplar, jackpine and cedar from 4 to 15 inches in diameter, all of which are equally distributed over the different sections, except in places in the western part of the township where there is second-growth poplar and willow scrub. There is very little open prairie. Hay is not very plentiful, but there are a number of small sloughs in the western part where a considerable amount could be had by doing a little clearing. Good water is plentiful all through the township in the small creeks, sloughs and swamps. The land is not liable to be flooded at any time. There are no water-powers. Fuel is very plentiful and can be had all through this section of the country, consisting of spruce, tamarack, poplar, jackpine and cedar. There are no stone-quarries, coal or lignite veins nor minerals of any kind. Game, consisting of moose, deer and black bears, is very plentiful. The trail from Woodridge to Whitemouth lake passes through the centre of the township in an east and west direction.—*J. Molloy, D.L.S., 1905.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 12.—*Continued.*

5. The soil in this township is nearly all fourth-class, and almost useless for farming purposes on account of there being so many almost impassable muskegs and swamps, especially in the northwest quarter of the township and in the southern two tiers of sections. The eastern half of the township is mostly covered with bush, principally spruce and tamarack from 4 to 18 inches in diameter. In the northwest quarter of the township there is a great deal of open muskeg and floating bogs, partially covered with small bluffs of spruce and tamarack. There is scarcely any hay to be found in the township. Water can be had everywhere in the swamps, muskegs and sloughs, all of which is of first-class quality. There are no creeks. Fuel is very plentiful. There are no stone-quarries, minerals nor lignite veins. Moose, deer and black bears are very plentiful. There are no trails leading into this township, but a few miles to the south is a good trail leading from Whitemouth lake to Woodridge.—*J. Molloy, D.L.S., 1905.*

6. (*North outline.*)—With the exception of about half a mile at the crossing of Whitemouth river the country along this line is spruce and tamarack swamp, in which very little timber is over 6 inches in diameter.—*W. A. Ducker, D.L.S., 1905.*

(*Subdivision.*)—There is very little land in this township fit for farming purposes, as it is mostly covered with spruce and tamarack. A few quarter-sections along the northern tier of sections are not quite as wet as the remaining part of the township. Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 18, 19 and 30 are almost useless for anything, as they are nearly all covered with bluffs of tamarack about 3 inches in diameter, low willow scrub and almost impassable floating bog. The strip of land of about 10 chains wide along the Whitemouth river, which enters the township in the east boundary of section 24 and leaves in the north boundary of section 33, is high dry and mostly covered with poplar and thick willows. The river has an average width of about 40 feet and an average depth of about $2\frac{1}{2}$ feet, but seems to get much deeper and wider as it leaves the township. A small stream which first appears in section 6 and passes through sections 7, 8, 17 and 16, joins Whitemouth river in section 21. The greater part of the township is covered with spruce and tamarack from 3 to 10 inches in diameter, except along Whitemouth river, where the timber is poplar, elm, birch and balsam. The only hay to be found is in small sloughs along Whitemouth river, and a considerable quantity along the creek in the sections above mentioned. Plenty of water can be had in any part of the township without digging. The land is not liable to be flooded from Whitemouth river. There are no waterfalls nor rapids from which power could be developed. The climate is the general Manitoba climate, without any indications of summer frosts. Fuel can be had in large quantities all through this section of country, consisting principally of spruce and tamarack. There are no stone-quarries, coal nor lignite veins nor minerals of any kind. Moose and black bears are very plentiful through this district, and are about the only kind of game found. Dawson trail, which passes 3 or 4 miles to the north, is the nearest trail.—*J. Molloy, D.L.S., 1906.*

7. (*East outline.*)—This boundary passes through swamp with occasional sandy ridges, the former being timbered with small spruce and tamarack, and the latter with pitch-pine and poplar.—*W. Pearce, D.L.S., 1875.*

(*South outline.*)—The country along this line is chiefly swamp, covered with spruce and tamarack of small size. Whitemouth river flows in a northerly direction through section 5; on each side of the river there are belts of dry land which average about half a mile in width; the soil is sandy and rather stony. The belts are timbered with large poplar, oak, spruce, balsam, birch and elm.—*W. Pearce, D.L.S., 1875.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 12.—*Continued.*

(*Subdivision.*)—The surface is level or gently rolling. The Dawson road crosses the township from east to west near the centre and is located on a broken sandy ridge varying up to 1 mile in width. The soil on this ridge is very light sand, and it is partially timbered with jackpine of an average of 6 inches in diameter. There are a few acres of brûlé, while nearly all the remainder is spruce and tamarack swamp with moss and peat soil. Whitemouth river crosses the southwest and northwest corners of the township, and has a width of about 1 chain. The depth and rate of current are difficult to give as the river was frozen. The soil on the ridges is very light and sandy, and in the lower portions consists of moss and peat too wet for cultivation unless drained. The greater portion of the surface is timbered with jackpine, with some poplar on the ridges, and spruce and tamarack in the swamps. Only a very small proportion of the timber is over 8 inches in diameter. No hay was seen. Water is very easily obtained and of good quality. Water-power might be developed on Whitemouth river, but at certain seasons of the year the flow is so small as to render it of little or no value. Fuel is very abundant. No stone-quarries nor minerals occur. Moose and spruce-partridges are fairly plentiful.—W. A. Ducker, *D.L.S.*, 1905.

This township may be conveniently reached by wagon road from Ste. Anne, a station on the Canadian Northern railway, from which place it is distant by rail about 30 miles. The road leading from Ste. Anne is that known as the old 'Dawson road,' and is well travelled as far as Brokenhead river, a distance of about 16 miles. The township may be also be reached by a wagon road from Bedford, another station on the same railway, and the distance from this point is somewhat less, though Ste. Anne is probably the better supply station. The soil of this township is composed chiefly of black muck with a sand subsoil on the low lands, while on the higher portions which are characterized as jackpine ridges both surface and subsoil are composed of sand, in some places, particularly in the northwestern part of the township toward the banks of Brokenhead river, mixed with gravel and boulders. This river cuts through sections 5, 8, 7 and 31, and a small tributary traverses sections 3, 10, 9 and 8, affording a good outlet for drainage, but until artificial drainage is employed to supplement the natural system but little of this township will be suitable for agricultural purposes. The higher portions composed of sandy ridges may be suitable for the growing of root crops—such as potatoes. Almost the entire surface is covered with a growth of small but in most places dense timber. The timber is of comparatively little value, fire having destroyed the greater part of the forest not many years ago. The existing forest is, therefore, largely composed of young trees which are too small for milling purposes. The several varieties of timber growing upon this township are given below in the order of their abundance: black spruce, jack pine, white poplar, tamarack, willow, alder, cedar, birch, ash, elm and balsam. A very limited amount of hay is found, as the surface is almost entirely covered with timber and scrub. Small hay marshes occur, however, upon the following sections: 5, 6, 23, 24, 25, 26, 27, 28, 31, 32, 33 and 36. This township is fairly well supplied with fresh water by Whitemouth river, a small tributary, and by two small fresh water lakes occupying a large part of section 27. In addition to these supplies good water may be found almost any place throughout the township by sinking wells to a depth of only a very few feet. It was from such latter source that we obtained our supply during the time of survey; the season having been an unusually dry one. Whitemouth river which in this township has a current of only about 1 mile per hour, is not capable of producing any significant water-power. Besides the volume of the stream in this locality is quite small. The locality of this township being so near Winnipeg, the climatic conditions are similar, very cold in winter, hot in summer and subject to very sudden changes of temperature. This township, being

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RANGE 12.—*Continued.*

thickly wooded with various kinds of timber, possesses an abundant supply of fuel. No coal is known to exist in the locality. No stone-quarries nor minerals of economic value are found. Large game, particularly moose, was observed to be common in this township and vicinity. Jumping deer, black bears, lynxes, wildcats, foxes and porcupines were also met with. Very few water-fowl were seen, but ruffed grouse and spruce-partridges were plentiful throughout the woods, and a few were seen. White-fish, pickerel and pike as well as some other varieties of good fish are found in more or less abundance in the Whitemouth river.—J. W. Tyrrell, D.L.S., 1906.

(*North outline.*)—The country along this line is all swamp or muskeg, except-

- 8.** ing a belt of dry land on either side of Whitemouth river. These belts extend back from the river 30 to 50 chains, and are timbered with large poplar, birch and balsam. The land is of fair quality. The swamps are timbered with small tamarack and spruce.—W. Pearce, D.L.S., 1875.

(*East outline.*)—Along this line the land is rather swampy with an occasional small muskeg, the former being timbered with small spruce and tamarack, the most of which has been destroyed by fire.—W. Pearce, D.L.S., 1875.

(*Subdivision.*)—This township is all bush, composed of poplar, willow, spruce, tamarack and a few cedar. All the merchantable timber has been cut, lumbering operations having been carried on for some years all along Whitemouth river, which runs through this township, entering in the southeast corner of section 6 and running through sections 5, 4, 9, 10, 15, 16, 21, 28 and 33. There is still a thick growth of bush all over the township with a few small marshes and tamarack swamps, the greater portion of which could be drained into Whitemouth river and thus made available for cultivation. All along the river the lands are drier on account of the natural drainage and are now available for settlement. The soil is mostly clay loam; the southern part of the township is more inclined to be sandy and gravelly with small ridges or scrubby jack pine. A good winter road runs along Whitemouth river, and can be made into a good summer road. Moose, about the only big game, are very numerous; one herd of caribou was seen. Foxes and fur-bearing animals such as minks, otters and muskrats are found. The climate is favourable for farming, and further north around Whitemouth settlement some of the finest crops in the province are raised.—G. C. Rainboth, D.L.S., 1904.

(*East outline.*)—Birch river runs in a northwesterly direction through sec-

- 9.** tion 1; there is a narrow belt of dry land on each side of the river. The soil is gravelly and sandy. The timber on this belt consists of oak, black ash, elm, spruce, birch and balsam. The remaining portion of the country along this boundary is swamp covered with small spruce, tamarack and cedar.—W. Pearce, D.L.S., 1875.

(*Subdivision.*)—This township is reached by trail from Whitemouth, which is about 15 miles distant. The trail can only be used for loads during the winter time or when the frost is in the ground, otherwise it is too boggy. The soil is generally a rich black vegetable loam and would make excellent farm land, but that the country is so low lying and level that muskegs and swamps abound, and everywhere the ground is damp and soggy. In the winter it is hard to distinguish all the muskegs as they are often heavily timbered, as is the rest of the country. The whole township is covered with bush varying from light scrub to 18-inch timber. The best of the timber has been cut by local lumbermen, but what remains will be ample for settlers use. Whitemouth and Birch rivers afford an ample water supply, and from the nature of the country water could be obtained anywhere by digging a few feet. There are no water-powers nor economic minerals. Game is plentiful; moose, deer, foxes and wolves were seen, also many partridges and rabbits. There were three settlers in the township, all

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RANGE 12.—*Continued.*

Galicians, with small houses, but no improvements. The settlement is gradually pressing this way from Whitemouth and this should soon be a prosperous farming country, but at present it is too inaccessible on account of the roads.—*G. A. Grover, D.L.S., 1904.*

10. This township may be described as a swamp with a few open muskegs, excepting a belt of good farming land averaging a quarter of a mile to a mile in width on each side of the Whitemouth river. However, the swamp area which covers a good deal of this district is not necessarily worthless land, for at a depth of 2 or 3 feet, in most places a clay bottom is found. Where the ground has been burned over and the vegetable mould destroyed, a clay surface, almost ready for the plough, is exposed.—*J. L. Coté, D.L.S., 1898.*

(*North outline.*)—This boundary runs through swamps along the edge of a large muskeg except in sections 35 and 36 where there is a ridge of about 1 mile in width, timbered with spruce and poplar of good dimensions.—*J. L. Coté, D.L.S., 1898.*

(*East outline.*)—From the northeast corner to Bog river, which crosses section 13, the country through which this line runs is almost wholly brûlé. Red granite exposures appear throughout the district. On the south side of the river the line runs across an open muskeg to the southeast corner of section 1, the depth along this line being about 4 chains.—*J. L. Coté, D.L.S., 1898.*

(*South outline.*)—This outline runs through muskeg as far as section 4; from here to the westerly limit of the range, the soil and timber are good.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—The western part of this township is watered by the Whitemouth river, and in general is adapted to agriculture. From section 29 to the northeast corner of the township, there is a belt of good land, although here and there there are outcrops of granite. The southeast part is mostly swampy. About 10 or 12 squatters have settled in this township; most of them have good buildings and have done a good deal of clearing. The Provincial Government has opened a colonization road through sections 30 and 19.—*J. L. Coté, D.L.S., 1898.*

12. (*North outline.*)—Going east the first 3 miles of this outline are partly covered with spruce and tamarack and partly open muskeg, then the ground rises. Granite exposures occur, and to the end of range 12 it is alternately hilly and swampy.—*J. L. Coté, D.L.S., 1898.*

(*East outline.*)—This outline runs through the same kind of country as that found along the north boundary.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—Nearly all the land in this township that is not in the muskeg is of first-class quality, the soil being either a sandy or black loam with a clay subsoil. The soil in the muskeg is black, and would make excellent hay land if drained. The greater part of the northwestern portion of the township consists of muskeg and swamp which is covered almost entirely with water averaging about 1 foot deep in the spring of the year. Bog river, a stream about 35 feet wide and 10 feet deep, enters the township in section 2 and flows northwesterly to the northwest quarter of section 15, where it loses itself and spreads out into the muskeg. The portion of the township which does not consist of open muskeg is covered with bush, consisting of spruce and poplar averaging 8 inches in diameter with thick scrub, brûlé and windfall. There is considerable hay to be found along the edge of the muskeg and also along the banks of the river. The water is all of first-class quality in the river and muskeg, as well as what

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 12.—*Continued.*

can be had by digging from 5 to 8 feet. There are no water-powers. The climate is the general Manitoba climate without any summer frosts. Fuel is very plentiful in this district, and consists of spruce, poplar and tamarack. There are no stone-quarries, coal nor lignite veins. A few surface stones are found in sections 25 and 36. Game, consisting of moose, black bears and deer, is very plentiful. The main line of the Canadian Pacific railway passes about 2 miles to the south of the township. The village of Whitemouth is situated in section 36, township 11, range 11, where there is a station, 2 general stores, a post office, churches, a school, and a population of about 400 people. The townships to the south and west are well settled by well-to-do settlers. A trail leading to Whitemouth enters the township in section 4.—*J. Molloy, D.L.S., 1906.*

Nearly all the land in this township is of third- and fourth-class, as it consists

- 13.** principally of spruce and tamarack swamps and muskegs with low willow scrub. It is impossible to drive into it except the northern part along the south shore of Winnipeg river, where the land is somewhat higher and in places dry. The timber consists principally of spruce and tamarack, being from 3 inches to 12 inches in diameter, and in a few places in the eastern part jack pine and poplar are found. There is no hay here, but in the townships to the west and south, it can be obtained in large quantities. Water, which can be procured in almost any portion of the township, is of first-class quality. The water in Winnipeg river is of the very best quality. Along this river there are numerous rapids and waterfalls where thousands of horse-power can be developed. The climate is the general Manitoba climate with no indications of summer frosts. Fuel is very plentiful all through this district and consists principally of spruce, tamarack, poplar and jack pine. There are no stone-quarries, coal nor lignite veins, but in the north and east parts of the township surface stones are very plentiful. Moose is about the only game to be found. There are good trails in the township to the west leading to the village of Whitemouth situated on the main line of the Canadian Pacific railway in section 36, township 11, range 11, where there are schools, stores and a post office.—*J. Molloy, D.L.S., 1906.*

The greater portion of this township is useless for farming purposes as there

- 14.** is scarcely any alluvial soil, nearly all the land being covered with stones and large boulders and rocks. The surface throughout is covered with bush, consisting of spruce, tamarack, poplar, jack pine, birch and underbrush, the average diameter being about 8 inches. There is no hay land in this township or in the adjoining ones. The water is of first-class quality in Winnipeg river, Pinawa channel and also in the swamps. The land is not liable to be flooded. There are a number of rapids along Winnipeg river in this township, which could be utilized for water-powers and could be further developed by the construction of dams whereby thousands of horse-power would be available. The climate is the general Manitoba climate with no indications of summer frosts. Fuel, consisting of spruce, tamarack, poplar, jack pine and birch, can be had in large quantities all through this district. Nearly all the township is covered with boulders. There are no minerals, coal nor lignite veins to be found. Game, consisting of moose, deer and black bears is very plentiful. There is a corduroy road from Winnipeg river at Lac du Bonnet station on the Canadian Pacific railway, running through sections 31 and 32 of this township and then south along Pinawa channel to section 11.—*J. Molloy, D.L.S., 1906.*

(*North and east outlines.*)—The country along these lines is rough and hilly,

- 15.** broken by ridges of granite rock and thickly covered with poplar, spruce and tamarack, with tamarack muskegs intervening. The greater portion of the country is useless for agricultural purposes.—*E. W. Hubbell, D.L.S., 1904.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 12.—*Continued.*

(*North and east outlines.*)—These outlines are a series of bare, granite rock

- 16.** ridges and knolls, varying in height from 15 to 80 feet. Between the ridges the country is mostly muskeg, covered with tamarack, spruce and poplar, varying in diameter from 4 inches to 14 inches. There is also a little birch and balsam. A considerable portion of these outlines is covered by the waters of lac du Bonnet and its tributaries.—*E. W. Hubbell, D.L.S., 1904.*

(*Subdivision.*)—The township is mostly wooded with poplar, spruce, birch, balsam

and jack pine. The southwestern portion has been burned and the soil as a whole is not of much value. Along Pinawa channel, when the timber has been taken off, there is land that would make good farms. No hay lands are found. The climate is similar to that at Winnipeg, but there are no high winds and the snowfall is much greater. The tramway being built by the corporation of the city of Winnipeg, from Lac du Bonnet village to Point du Bois, crosses Pinawa channel about 3 miles south of the south boundary of the township, and will, when completed, be an easy means of access. There are no minerals, stone quarries nor water-powers in this township. Game, consisting of moose, deer, geese and ducks, is plentiful.—*G. H. Watt, D.L.S., 1907.*

This township is accessible by trail over the ice on lac du Bonnet in winter,

or by boat in summer from Lac du Bonnet station, the terminus of a branch of the Canadian Pacific railway which leaves the main line at Molson. A

- timber berth comprises sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21 and 22 in this township. It is all timbered and consists of rocky ridges with muskeg between them. It is very rough and, except for the timber, of but little value. This timber consists of poplar up to 18 inches in diameter, spruce up to 16 inches and small tamarack and jack pine up to 10 inches. The timber is rather light, except for some groves of spruce and tamarack. In the muskegs there is as a rule small spruce and tamarack with willow. Throughout the limit there is a dense growth of underbrush. Two or three small creeks run through this berth, but there are no water-powers. No minerals of any description were noticed, the depth of the snow at the time of survey rendering it difficult to observe the country closely. There were indications of large game, such as moose, deer, etc. In the lake, sturgeon and jackfish seem to abound. There are no settlers. Along the edge of the lake a limited supply of hay may be obtained.—*C. F. Miles, D.L.S., 1909.*

(*Partial.*)—Sections 1 and 2 of this township are easily reached by boat from Lac du Bonnet, a station on the Canadian Pacific railway, via Winnipeg river and lac du Bonnet. The soil consists of 2 or 3 inches of leaf mould over a subsoil of heavy clay, but a large part of the township is either rock or swamp. This soil, when cleared of timber and cultivated, will grow any of the grains, vegetables and grasses grown in the best part of Manitoba. The surface is rolling and is rocky and swampy, with small spruce and tamarack in the swamps, larger timber, pine on the rocky portions and poplar and spruce on the margins of the swamps. Sections 11, 12, 13 and 14 contain timber large enough for railway ties, about 5,000 of which could be obtained. There are no streams nor water-powers and no land liable to be flooded. All of the water is soft and good. There is no hay in this township. The climate is similar to that of the rest of Manitoba, but liable to be more moist in summer than the southwestern prairie parts. Plenty of wood for fuel is found in every quarter-section. There are no coal nor lignite veins. Rock, mostly granite, is found in every section and will be suitable for building purposes. No minerals of economic value were discovered. Large quantities of pulpwood or cordwood may be obtained in this

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 12.—*Continued.*

township, the timber being generally too small for lumber or railway ties. Game, consisting of rabbits, partridges, moose and jumping deer, is plentiful. Timber wolves, coyotes and foxes are found. Fish are plentiful in lac du Bonnet, the varieties being sturgeon, whitefish, jackfish, pickerel, perch and suckers.—*J. Francis, D.L.S., 1913.*

RANGE 13.

(*North outline.*)—The western half of this outline is wooded with jack pine and poplar, and the eastern half passes through a tamarack swamp.—
1. *J. A. Coté, D.L.S., 1901.*

(*Subdivision.*)—About 50 per cent of the northeasterly part of this township is good land covered with poplar. The remainder is composed of spruce and tamarack swamps, the timber in which is suitable only for fuel. The Canadian Northern railway passes through sections 32, 29, 28, 21, 16, 15, 14 and 13.—*J. A. Coté, D.L.S., 1901.*

The soil in the southwest part of this township is very sandy and unfit for farming purposes. The surface is generally covered with jack pine from 3 to 6 inches in diameter, with the exception of section 17, on which there is considerable poplar, spruce and tamarack. There is no hay land in the southwest part of this township. The water is fresh; permanent water can be had by digging from 12 to 15 feet. The land is not liable to be flooded. There are no waterfalls. The climate is the general Manitoba climate. No summer frosts occur. There is plenty of jack pine for fuel. No coal or lignite veins, stone-quarries nor minerals are found. Moose, black bears, jumping deer and prairie-chickens are very plentiful. The Canadian Northern railway passes through the northern part of this township. The station of Vassar is situated in section 6 of the township to the north, where there is a store and post office. Trails from the south and from Pine Valley settlement to the west pass through this township to Vassar.—*J. Molloy, D.L.S., 1905.*

2. The westerly portion of this township is undulating to rolling and is largely brûlé. Roseau river runs southerly through the central portion and most of the land along its banks is low and swampy. A large portion of the east half of the township is spruce and tamarack swamp, in which the timber is very small. Most of the rolling land is sandy and of very poor quality. The Canadian Northern railway crosses the southwest corner of the township; Vassar station is situated in it. There is some fairly good land in the northern portion and near Vassar station, but only a small portion of the township is suitable for settlement.—*W. A. Ducker, D.L.S., 1902.*

There is a considerable amount of good land in this township, the soil being divided between sandy loam with clay subsoil and black loam with sandy loam subsoil. It is very suitable for grain-growing as well as for hay. The Canadian Northern railway passes through section 6, where the station of Vassar is situated, as well as the post office of Vassar. There are well-travelled trails leading from this township to Winnipeg and other points in the district. With the exception of part of the southwest corner, all of the township is heavily timbered with spruce, tamarack, poplar and cedar from 5 to 12 inches in diameter. There is very little hay to be had in this township as yet, but it can be procured a few miles to the south and west. The supply of water is good. Roseau river, a stream in the spring season of about 30 feet wide and 9 feet deep, enters the township in section 33 and flows in a southeasterly direction, leaving the township in the southeast corner. Water can also be had in good quantities at a depth of about 12 feet, all of the best quality. In the spring the land adjoining Roseau river is covered with water from 1 to 3 feet deep. There are no water-powers of any account to be had

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

in this township. The climate is temperate, with no summer frosts. Wood can be had in unlimited quantities, both in this township and in the adjoining townships to the north and east. There are no coal or lignite veins in this township. There are no stone-quarries, although enough stone can be found in the district for building purposes for the early settlers. There are no minerals. The supply of game is good, all through this district, consisting of black bears, deer, moose, rabbits, prairie-chickens and partridges.—*J. Molloy, D.L.S., 1904.*

Whitemouth lake occupies several sections in the eastern part of the township.

3. The quality of water in the lake is fairly good, and the depth reaches a maximum of about 14 feet, though the greater portion is under 4 feet. The bottom is generally muddy and very soft. The lake is fairly well supplied with pike, pickerel and suckers. Nearly all the south half consists of spruce and tamarack swamp and is of no value for agricultural purposes. The north half is more undulating and timbered with poplar, spruce and jack pine with tamarack in the hollows. The soil of this portion varies from sandy to sandy loam and portions of it have a clay subsoil. A small settlement might be made in this portion, though it is somewhat difficult of access in summer.—*W. A. Ducker, D.L.S., 1902.*

The west portion of the township is chiefly clay with more or less sand; the remainder has a sandy soil with, in some places, a mixture of clay in the subsoil. The soil could not be considered to be suitable for agricultural purposes other than the growing of hay and oats. The surface is level and is timbered with spruce, poplar, tamarack, balm of Gilead, birch and some balsam. Sections 2, 3, 4 and 5 are very well timbered with spruce, poplar, birch, balm of Gilead and tamarack up to 20 inches in diameter, considerable of which would be suitable for lumber and timber. The northerly part of the township is covered chiefly with poplar and balm of Gilead and the swamps with spruce and tamarack from 4 to 10 inches in diameter. Spruce is scattered throughout the township, and on the high land is generally from 8 to 15 inches in diameter. There is some small cedar along Roseau river in the southwest part of the township. There are some small meadows through the township and some larger ones along the shores of Whitemouth lake towards the north part of the township. The water throughout the township is fairly good and has very little, if any, alkali; that in Whitemouth lake is not as fresh as in the sloughs and creeks. There are no water-powers in the township, as there are no streams of any size. The climate is good, there being no summer frosts to damage fruit or grain. Strawberries were very abundant, growing all through the township even where heavily timbered. Some gooseberries, huckleberries and a few raspberries were found. Through the latter part of May and a good part of June there was considerable rain which raised the water in the swamps and creeks. During the whole summer there is sufficient rainfall for the growth of crops of any kind. Wood is very plentiful throughout the township, except on a narrow strip around Whitemouth lake. No coal, nor lignite veins were seen in the township. No stone-quarries were met with but boulders and small stones are to be found in many places. No minerals, nor mineral-bearing rocks, not even outcroppings of any kind of rocks, were seen. Game, such as moose, red deer, antelope, bears, wolves, foxes and small animals, is very plentiful. Ducks and geese are very numerous on Whitemouth lake. Partridges are also plentiful.—*L. Bolton, D.L.S., 1906.*

4. (*North outline.*)—Muskeg, cedar and tamarack swamps prevail with an occasional ridge of jack pine or poplar.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—The southeast corner of this township is broken by Whitemouth lake which in this part is very shallow and muddy with marshy shores. A well-defined sandy ridge crosses the township from section 12 to section 18. On this ridge there is

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

a fairly good trail leading from the lake to Woodridge, though the route is rather circuitous. Nearly all that portion of the township north of this ridge is spruce and tamarack swamp or muskeg and is of no value for settlement. The soil along the ridge is very light and sandy but south of it is of somewhat better quality and might be cultivated successfully.—*W. A. Ducker, D.L.S., 1902.*

The soil in this township is chiefly sand with very little loam especially on the sand ridges, which are only high land. In the swamps and muskegs there are quite a depth of moss, the subsoil being decayed vegetable matter or peat. This township is not suitable for agricultural purposes. It is timbered throughout. The higher parts are timbered with jack pine and some Norway pine. The pine is from 6 to 16 inches in diameter and is fairly good for saw-logs or building timber. In the swamps, especially north of the sand ridges, there is good timber such as spruce, tamarack, poplar, balm of Gilead and a few cedar running from 6 inches to 20 inches in diameter. Sections 10, 11, 12, 13, 14 15, 16, 17 and 18 are the best timbered in the township. The north half of the township is chiefly muskeg with small spruce and tamarack and is very wet and soft. Along the north side of Whitemouth lake and along a creek there are good meadows where considerable hay has been cut this season. There are also a few small meadows throughout the township. All the water is good, there being no alkali. Black creek is the only stream in the township. It averages from 4 to 6 feet in width and about 6 inches in depth, though in the latter part of the summer it is considerably less. The water is fresh. The water in the muskegs is fairly good. There is no danger of the lands being flooded in this township except in a very wet season, when the low lands bordering on Whitemouth lake might be flooded. There are no water-powers in the township, as there are no streams of any size. The climate is good. There was very little summer frost and none sufficient to damage strawberries or other fruits, which were very abundant. Sufficient rain fell during the summer for the growth of any crop. There is plenty of wood for fuel, but no coal or lignite veins were seen. No stone-quarries were seen, but large and small rolling stones are quite plentiful, except in the muskegs. No minerals were observed nor any mineral-bearing rocks, not even outcroppings of any kind of rock. Game of all kinds was very plentiful, such as moose, red deer, antelope, bears, wolves and other small animals. Geese, ducks, all kinds of water-fowl and partridges were also numerous.—*L. Bolton, D.L.S., 1906.*

The land in this township is all third-class. The soil is generally a black loam,

- 5.** but the surface is mostly swamps and muskegs, with a few high ridges which are somewhat sandy and stony.

The whole of the township is covered with bush except in a few places where there is open muskeg with low willow scrub. The timber consists principally of spruce, tamarack, cedar, poplar and jack pine equally distributed throughout the township, the average diameter being about 6 inches. There is no hay to be found in this township, and scarcely any throughout the district. All the water is of first-class quality, and can be found in almost any part of the township, either on the surface or by digging a few feet. Whitemouth river, a stream from 2 to 4 feet deep and about 30 feet wide, flows through the northeast corner of this township, flowing north. The climate is the general Manitoba climate, with no indications of summer frosts. Fuel is very plentiful all through this district consisting of spruce, tamarack, jack pine, poplar and cedar. There are no stone-quarries, minerals, coal or lignite veins in this district. Moose and black bears are about the only kinds of game to be found. There are no trails running through this township except a few winter trails.—*J. Molloy, D.L.S., 1906.*

All the land in this township ranks as third-class. The soil is mostly black

- 6.** loam with a sandy subsoil, but the township is made up mostly of spruce and tamarack swamps covered with a heavy bush, and these, if cleared and drained,

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

would make good land for farming purposes. The surface is nearly all level and covered with spruce and tamarack, but along Whitemouth river, which runs through the south half of the township, there is considerable poplar and thick willow. The spruce, tamarack and poplar vary in size from 4 to 10 inches in diameter. The spruce and tamarack is equally distributed throughout the whole township, but the poplar is found only along Whitemouth river. Hay can be cut all along the banks of the river. The water is all of first-class quality and is very plentiful. If not found on the surface it can easily be had by digging a few feet. The water in Whitemouth river is first-class. There are no water-powers available. The climate is the general Manitoba climate, with no indication of summer frosts. Fuel is very plentiful and can be had all through this district, consisting of spruce, tamarack, poplar and jackpine. There are no coal or lignite veins, stone-quarries nor minerals of any kind. The only game to be found is moose and bears, which are very plentiful. There are no trails running through the township, but the Dawson road is a few miles to the north of the township, running to Ste. Anne, a town on the Canadian Northern railway, where these are stores, schools and a post office.—*J. Molloy, D.L.S., 1906.*

(*South outline.*)—The country along this line is chiefly swamp, which is timbered with small spruce and tamarack, and is of little value. Where the land is dry the timber has been destroyed by fire, and in such places the soil is gravelly.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—There is a jackpine ridge about half a mile in width crossing the south boundary on sections 1 and 2. This ridge is thickly timbered with jackpine up to 8 inches in diameter. The Dawson road crosses the township a little south of the centre on a broken narrow ridge, timbered with small jackpine and scrub. There are long areas of swamp and muskeg, principally in the southeast quarter of the township, and the remainder is timbered with black spruce and tamarack, only a small proportion being over 6 inches in diameter. The soil on the ridges is very light sand while the remainder is wet and swampy. No hay was seen. The water is good and abundant. No water-powers occur. Fuel is abundant. No stone-quarries nor minerals were found. Moose and spruce-partridges are fairly plentiful.—*W. A. Ducker, D.L.S., 1905.*

This township may be reached by wagon road from Ste. Anne station on the Canadian Northern railway, from which place it is distant about 40 miles. This road is what is known as the old "Dawson road," and is well travelled as far as Broken-head river, a distance of 16 miles. The township may also be reached by a road from Bedford, another station on the same railway. The soil of this township is composed chiefly of sand on the higher portions, and black muck or peat in the swamps, and almost the entire township possesses a subsoil of sand and gravel. The sandy sections would seem to be of little value unless for the raising of potatoes or other root crops, but the swampy lands being composed of rich black muck, will when drained be suited for general agriculture. The surface of the township is slightly rolling, and is entirely covered by a forest of various kinds of timber. It is unbroken by the presence of lakes or streams, except in the northeast corner of section 36, where it is broken by Birch river. The timber is of comparatively little value, being small and unsuited for milling, with the exception of a few scattered tamarack. The various kinds found are as follows, named in the order of their abundance: Black spruce, jackpine, tamarack, white poplar, willow, alder, birch, balsam, cedar, ash and elm. There are several hay marshes, the largest extending in an easterly and westerly direction and occupying part of sections 14, 15, 16, 21 and 22. Other smaller marshes occur in sections 11, 12, 13, 17, 18, 19, 20 and 24. Except in the marshes the only surface supply of water is in section 36, which is crossed by the Birch river—a sluggish stream 90 feet wide by 6 feet deep where crossed by the east boundary of section 36. Fresh

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

water may, however, be obtained almost any place in the township by the sinking of wells to the depth of only a very few feet. No water-power can be developed. The locality of this township being so close to Winnipeg, the climatic conditions are similar—very cold in winter, hot in summer, and subject to sudden changes of temperature. The timber supplies an abundant local supply of fuel. No coal is found. Some rock exposures occur in sections 26, 34 and 36, and these, being composed of granite, it is probable that some good building stone may be found. No minerals of economic value are known to exist. Large game, particularly moose, were observed to be common in this township and vicinity. Jumping deer, black bears, lynxes, wildcats, foxes and porcupines were also seen. Very few water-fowls were seen, but ruffed grouse and spruce-partridges were plentiful, and a few prairie-chickens were seen in the vicinity. Several varieties of fish are reported to exist in Birch river.—J. W. Tyrrell, D.L.S., 1906.

(*North outline.*)—The country along this line is all swamp except along the

- 8.** banks of Birch river which runs diagonally in a northwesterly direction across the township. The swamps are generally covered to a great depth with moss, on which there is a growth of small tamarack and a few spruce and cedar. Along the Birch river the belts of dry land are from 10 to 20 chains in depth. The soil is light sandy loam. Here the timber is of good size.—W. Pearce, D.L.S., 1875.

(*Subdivision.*)—This township is all bush, and comprised of poplar, willow, spruce, tamarack and a few cedar. All the merchantable timber has been cut, but there is still an abundance of firewood and sufficient building timber for local use, lumbering operations having been carried on for some years all along Birch river, which runs through this township. Birch river is a branch of Whitemouth river and runs northwards through this township, entering it in section 1, and running through sections 1, 2, 11, 10, 14, 15, 16, 29, 32 and 31. There is still a thick growth of bush all over the township with a few small marshes and tamarack swamps, the greater portion of which could be drained into Birch river and thus made available for cultivation. All along the river the lands are drier on account of the natural drainage, and are now fit for settlement. The soil is mostly clay loam. Old winter roads used by the lumbermen some years ago are still to be found, but are not fit for summer transportation. A good wagon road could be easily made, joining to the present settlement at Whitemouth, a station on the Canadian Pacific railway, and thus making this township convenient for settlement. The climate seems to be about the same as the usual Manitoba climate. Moose are plentiful, some caribou were seen. Fur-bearing animals comprise minks, martens, otters, muskrats, prairie-wolves, and foxes.—G. C. Rainboth, D.L.S., 1904.

This township is about 15 miles southeast of Whitemouth, Man., but the only

- 9.** road to it is on the ice on Birch river and then over some of the old lumber roads, which are also only passable in the winter. The surface of the township is generally covered with moss, but below that there is in some places a rich black loam, which might make excellent farm land were it drained, but at present muskegs are so numerous and the land is all so low and level that it would not appear to be well suited for anything. Much of the township is quite heavily timbered and there is some good cedar and tamarack in the south and west portions. In the north and east the timber is generally lighter and muskegs are more numerous. Good water can be obtained any place to a depth of 3 feet, there are no water-powers. No minerals of economic value were seen. Numerous large outcrops of granite are found in the muskegs. Game, such as moose, deer, wolves, and foxes, and also partridges and

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

rabbits is plentiful. Birch river crosses the southwest quarter of section 6. This is the only part of the township that might probably be settled in the near future.—*G. A. Grover, D.L.S., 1904.*

All the soil in this township is fourth-class, about one-third being rocks and
10. the remainder being spruce and tamarack swamps and muskegs with willow and small spruce and tamarack. The soil is therefore practically of no use for agricultural purposes. The whole of the township is covered with bush consisting principally of jack pine, spruce, tamarack and poplar from 3 to 7 inches in diameter and willow, tamarack, spruce and jack pine scrub all equally distributed throughout the district. There is very little hay, but there are places which, if the country were drained, would produce some hay. All the water is fresh and can be had almost any place without digging, where there are no rocks. There are a few small creeks all of which have good water. No lakes were found. There are no waterfalls nor rapids from which any power could be developed. The climate is the general Manitoba climate, with no indications of summer frosts. Fuel is plentiful and can be had in almost any part of the township, and all through this district, consisting principally of spruce, tamarack and jack pine. All the large timber has been cut. There are no stone-quarries, coal or lignite veins nor minerals. Moose and deer are about the only game to be found. The Grand Trunk Pacific railway runs through the southern part of the northern tier of sections. There are no trails except a few wood trails leading to a siding on the Canadian Pacific railway about a mile north of the northeast corner of section 36.—*J. Molloy, D.L.S., 1908.*

The main line of the Canadian Pacific railway passes through the southern portion of this township, and the Grand Trunk Pacific passes about a mile to the south. All the land, with the exception of a few acres along the Canadian Pacific railway, is fourth-class, being either rocks or swamps. It would not be fit for settlement of any kind. All of the surface is timbered with spruce, tamarack, jack pine, poplar and scrub. The timber varies in size from 3 to 10 inches in diameter. There is no hay except along the Canadian Pacific railway in section 1, where there is a hay meadow. All the water is good and can be had in any part that is not rocky. There are no streams or lakes. The climate is the general Manitoba climate without any indications of summer frosts. Fuel, consisting principally of tamarack and spruce, is plentiful. There are no stone-quarries. The rock is granite and there are a few boulders. Game consisting of moose, deer and black bears is very plentiful all through this section of the country. The station of Darwin is situated in section 9 of this township.—*J. Molloy, D.L.S., 1909.*

(*North outline.*)—The land along this line is entirely unfit for agriculture,
12. being mostly muskeg, broken by numerous rocky ridges from 20 to 60 feet high. It has been swept by fire and is now covered by dead pitch pine and poplar, heavy windfall and small green poplar, willow and pitch pine. The Rennie crosses the north boundary of section 31, flowing northwest. There are no water-powers. Some hay could be cut near the river. Moose, rabbits and prairie-chickens are plentiful. No minerals of economic value were found. The climate is similar to that of other parts of Manitoba.—*B. J. Saunders, D.L.S., 1906.*

(*Subdivision.*)—There are no trails in or leading into this township. The only practicable way of reaching it is by canoe by way of the Rennie river and lake Brereton. The soil is all fourth-class and is not suitable for agriculture. The township is wholly covered with bush, principally second-growth jack pine and poplar but there

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

are patches of jack pine, poplar, spruce and tamarack which have escaped the fires and which average from 6 to 12 inches in diameter. Eighty per cent of the surface has been burned over by forest fires. The Rennie river furnishes an abundant supply of fresh water, and the water in the swamps throughout the township is also of good quality. The Rennie river traverses the township in a general northwesterly direction. It averages 35 feet in width and 4 feet in depth and has a current of about 3 miles per hour. Its volume is greatly reduced in dry weather, but in a rainy season it floods the bottom lands to a depth of 3 feet. There are some small rapids, but the fall and amount of water are not sufficient to develop much power. The climate is the general eastern Manitoba climate. Summer frosts are rare. Timber in sufficient quantities for fuel purposes can be procured almost anywhere in the township, especially dry timber. There are no coal, lignite veins nor quarries. Throughout the township there is a continuous formation of coarse granite or gneiss, thinly covered with soil in places. No mineral of any value have been discovered. Moose are very plentiful, also partridges, prairie-chickens and rabbits. Most of the smaller fur-bearing animals and beavers are also found. There is no hay in this township.—*J. Molloy, D.L.S., 1911.*

The land in this township is useless for farming purposes as it is very rough

- 13.** and stony. The Winnipeg river runs through the northwest corner and is about one-half a mile wide. There are rapids along this part of the river from which a great deal of power can be developed. The water throughout the district is of first-class quality. Fuel is very plentiful and consists principally of spruce, tamarack and jack pine. There are no minerals nor stone-quarries. However, surface stone and boulders are very common. Moose are plentiful and are about the only game found. Lac du Bonnet, a town on a branch line of the Canadian Pacific railway, lies about 15 miles to the northwest. Here there are stores, churches, schools, a post office and a saw-mill. There are no trails through the township.—*J. Molloy, D.L.S., 1906.*

This township may be reached by a sleigh road from Whitemouth in winter, or in summer by boat or canoe on the Winnipeg, Whiteshell and Rennie rivers. The surface of the southern two-thirds of the township is, generally speaking, rough and rugged, with bare granite hills or knolls protruding from the muskeg. The slopes of the rocky ridges are timbered with second-growth spruce, poplar and jackpine, all standing in a mass of deadfall and upturned roots. In the northern part there are some large muskegs with practically no valuable timber. On the higher ground a few spruce may be found scattered through the woods, which are mostly poplar with everywhere a tangled mass of maple, hazel and birch undergrowth. Along Rennie river in the east half of the township there are good hay meadows, some of which are liable to be flooded when the Winnipeg river rises in the late summer. Fresh water is everywhere plentiful. The Rennie river is navigable for boats drawing 3 feet of water for a distance of about 10 miles in this township, where two falls occur, one 6 and the other about 14 feet high. The river is from 6 to 200 feet wide and has little current. There is very little difference between the level of Winnipeg river and that of this river where it crosses section 8, that is, in ordinary late summer levels. The rock exposed is everywhere the pink granite of Northern and Western Ontario. No minerals were seen. Bears, moose, caribou and deer are plentiful, and there are countless numbers of ducks in the fall of the year. Pike and pickerel teem in the river.—*G. H. Watt, D.L.S., 1907.*

The Winnipeg river passes through the southwest corner of this township.

- 14.** In all other respects it is similar to the township to the south, previously described.—*J. Molloy, D.L.S., 1906.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

This township may be reached by canoe on Winnipeg river either from Kenora or Lac du Bonnet. The only soil of any value is in small strips along the river. The surface is everywhere timbered, but in some places it has been overrun by fire. Dead-fall in the northern part of the township renders it most difficult to travel. The timber is principally poplar and jackpine with a thick growth of underbrush everywhere. There is no hay in this township. The water is everywhere good, especially in Winnipeg river, which is a beautiful stream. There are no water-powers, stone-quarries nor minerals. The climate seems to be good, no summer frosts being experienced. Game is plentiful, moose, caribou, deer and bears having at different times been seen by my party. Small game and wild fowl are also to be found in season.—G. H. Watt, D.L.S., 1907.

15. The township is crossed by the tramway being built by the city of Winnipeg, which crosses the township from west to east along the north interior chord.

The northerly third of the township is mostly burned over, but the remainder is timbered with fair-sized poplar, spruce, birch and jackpine. The surface is everywhere broken by rock ridges covered with jackpine, some of them burned over. Between the ridges where there is no muskeg there is mostly a clay soil supporting a heavy growth of poplar and birch with dense underbrush. The soil is good but areas of it are so much broken by ridges of rock that for farming purposes the township is of very little value. There is little hay. The water in the creeks and in Rice lake is fresh, and good to drink. No minerals, stone-quarries nor water-powers were noted. Moose, deer, caribou, bears, lynxes and wolves are numerous.—G. H. Watt, D.L.S., 1907.

16. From Whitemouth we proceeded by a good winter road to the village of Lac du Bonnet. Thence we followed a well-travelled road north along the west bank

of lac du Bonnet for a distance of about 5 miles. From this point we travelled across lac du Bonnet to the northeast corner of the lake where our survey began. The country along the north boundary of the township is mostly rock with low ground and muskeg and is totally unfit for agriculture. The surface is rolling and is heavily timbered with good spruce and poplar averaging about 10 inches in diameter, lac du Bonnet extends into the northwest corner of the township. The water is fresh and good, and is free from alkaline substances. On account of the great depth of snow it was impossible to judge as to the mineral resources of the country. A few moose were seen and many fresh tracks were noticed. Coyotes, rabbits and porcupines were also seen. The climate is similar to that of other parts of Manitoba.—B. J. Saunders, D.L.S., 1906.

This township is broken by lac du Bonnet and may be reached by boat or canoe from this lake. The northern part of the township may also be reached by the Oiseau river, and the southern part by canoe on the creek that flows out of Rice lake and empties into Pinawa channel. There is very little soil of any value. There is a strip of poplar country bordering on the lake which may be tilled if the woods were cleared off. The surface is rough and much broken by granite ridges, some of which are very abrupt and steep. The timber is mostly poplar, jack pine and spruce, generally of small size, with occasional heavy woods. The southern part of the township has been burned bare and is covered with second-growth timber and scrub. There is little or no hay to be found. The water is everywhere good. There are no water-powers. No stone-quarries nor minerals of any kind were noted. Game abounds and consists of moose, deer, caribou, bears and lynxes. Wolves were plentiful.—G. H. Watt, D.L.S., 1907.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 13.—*Continued.*

This township may be reached by boat or canoe from lac du Bonnet which

- 17.** encroaches on its southwest corner, and Oiseau river which crosses from east to west in the southern third of the township. A small quantity of hay may be cut at the mouth of the river. The surface of the country is rough and broken by rocky ridges. Between these in the northwestern part of the township there are spruce and tamarack muskegs. In other parts of the township the wood is mostly poplar and birch. There is everywhere dense scrub of maple, hazel and willow, and along the creeks, which are very small, alder swamps. There might be some homesteads located here, but none would be very large on account of the rocky ridges. The water is everywhere fresh and the climate good. About ten years ago there was a rush of gold seekers to this part of the country, and there is much evidence of the claims which were staked out there still to be found. Game consists of moose, deer, bears and fur-bearing animals. Geese and ducks are plentiful in season. Wolves, large and small, are also found.—*G. H. Watt, D.L.S., 1907.*

(*South two-thirds.*)—This township may be reached with flat sleighs in winter

- 18.** by a trail leading due north from Bird River post office, which is situated in section 2, township 17, range 13. The only way of reaching it in summer would be by walking. A few small patches of soil, suitable for cultivation when cleared, are found along the small creeks. This soil consists of from 2 to 3 inches of humus over a heavy grey clay. Good crops of grass or grain could be produced. The surface is rolling and covered with small timber, very sparse and scrubby in the swamps. Timber from 2 to 8 inches in diameter, consisting of pine, spruce, tamarack, poplar and birch, is fairly dense throughout, except in sections 7, 8 and 19, where extensive swamps are found. There is no hay in this township. Water is fresh and plentiful in the larger swamps. A creek crosses the west boundary of section 6. At this point it is about 20 feet wide, 5 feet deep, and has a slow current. No land is liable to be flooded along its course. There are no water-powers. The climate is similar to that of the southeastern part of Manitoba. Wood for fuel is abundant and may be procured in every quarter-section. No coal nor lignite veins were noticed. Granite rock is found in all parts of the township and might be quarried when required. No minerals were noticed. Moose, jumping deer, rabbits and partridges are plentiful.

—*J. Francis, D.L.S., 1913.*

RANGE 14.

Mud creek flows southerly through this township and has been used in the

- 1.** southern part for driving logs for several years past. The Canadian Northern railway crosses the central portion of the township from east to west, and Sprague station is located on section 15. Portions of the west half of the township are undulating and partially timbered with poplar and birch, and a number of quarter-sections in this portion are probably fit for settlement, but the township generally is flat and swampy with large muskegs and very wet spruce and tamarack swamps. The timber has been extensively culled for lumber and fuel purposes.—*W. A. Ducker, D.L.S., 1902.*

The soil in this township is mostly first-class, being either a black or sandy loam with a clay subsoil. It will make first-class land for grain-growing purposes when cleared. The whole township is covered with bush, consisting of tamarack, spruce and poplar from 3 to 10 inches in diameter with a heavy growth of under-brush. There is very little hay to be found except on part of sections 24 and 25, where there is a large muskeg containing from 2 to 4 feet of water, according to the season of the year.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

The water is all of first-class quality, both in the swamps and creeks. Excellent water can be had at a depth of from 6 to 12 feet. Roseau river, a stream about 40 feet wide and 6 feet deep, crosses the township, flowing in a southeast direction. The land is not liable to be flooded. The climate is temperate, having no summer frosts. Fuel is to be had in unlimited quantities, consisting of spruce, tamarack and poplar. There are no coal or lignite veins. There are no stone-quarries nor minerals. Game, consisting of moose, deer, black bears, prairie-chickens and partridges, is to be found all through this section of the country. The Canadian Northern railway passes through the centre of the township from east to west. Sprague, a station on this railway, is situated on the southwest quarter of section 15, where there is a store, post office and school. There are about 40 squatters in the township. This part of the country is well supplied with trails, which were in use before the railway was built.—*J. Molloy, D.L.S., 1904.*

The settlers in this district are making slow progress in clearing their land of the heavy forest growth. The forest consists of poplar, birch and tamarack of considerable commercial value. The settlers live by selling wood, ranching on a small scale, trapping and hunting.—*G. A. Bennett, D.L.S., 1912.*

Nearly all of this township is spruce and tamarack swamps, in which most
2. of the timber is very small and scattered. The township is too wet to be of any use for agricultural purposes.—*W. A. Ducker, D.L.S., 1902.*

The greater part of this township consists of sandy loam with a clay subsoil. When the land is cleared and cultivated it will be suited for farming purposes. In the swamps the soil is a black loam. All of the township is covered with bush, consisting principally of poplar, spruce, tamarack, cedar and thick willow scrub. The cedar, tamarack and spruce are principally in sections 6, 7, 8, 17, 18, 23 and 24, and vary from 5 to 10 inches in diameter. Sections 1, 2 and 3 are tamarack swamps, the average diameter of the tamarack being about 3 inches. The northwestern part of the township is mostly tamarack swamps and some open muskeg. The remaining part consists principally of undulating land covered with poplar and underbrush. There is very little hay land to be found. The water is all of first-class quality and plentiful. Roseau river, a stream about 20 feet wide and 10 feet deep, passes through the southwestern corner of the township. The land is not liable to be flooded, but when the rains are heavy, the greater portion of the township is wet. There are no water-powers. The climate is temperate and no summer frosts occur. Fuel can be had in large quantities in this and in the adjoining townships, consisting principally of spruce, tamarack and poplar. There are no stone-quarries, coal nor lignite veins to be found. Moose, deer and black bears are very plentiful all through this district. Trails, from the township to the south, lead up to the southern part of this township. The Canadian Northern railway passes through the centre of the township to the south, where Sprague village is situated.—*J. Molloy, D.L.S., 1905.*

The northwest portion of this township is very much broken by Whitemouth
3. lake. The water in the lake is of fair quality, but most of it is very shallow with a soft, muddy bottom. The lake is fairly well supplied with pike, pickerel and suckers. The land on the island in sections 31, 32 and 33 is fairly dry and well wooded with poplar, birch, jackpine, spruce and some tamarack. The remainder of the township is low and swampy, and timbered with small spruce and tamarack, most of which is too small to be of any value even for fuel.—*W. A. Ducker, D.L.S., 1902.*

This township was reached by a good wagon road which runs from Woodridge, a station on the Canadian Northern railway, into townships 4, ranges 13 and 14. The

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

northerly portion, in fact, nearly all the township outside of Whitemouth lake, was either swampy or muskeg. We had to abandon our team and wagon and use boats to move the party into the township. The soil is clay with very little loam on the surface. That part of the township not muskeg, had the surface burnt over some years ago, killing the timber, which was chiefly cedar in this part. There is a small depth of loam with a subsoil of clay, and it would be good for agricultural purposes if it were not so flat and low. The surface is timbered and there is no prairie. The timber is small throughout the township, averaging from 4 to 6 inches in diameter. In the muskegs the timber is mostly dead, small and scrubby. There is some good cedar and tamarack along the southeast side of Whitemouth lake, but it does not extend far. There is very little hay in the township, the land being too wet and marshy. The water is fairly good and is free from alkali in the small creeks and muskegs. The creeks are merely outlets from the muskegs into Whitemouth lake. There are no water-powers available as the country is too flat. There is not a point in the township that we visited that would be over 5 feet above the spring level of the lake. While surveying the township the weather was good for the season, but in my opinion the township would be subject to summer frosts on account of being so low and swampy. There is an abundance of wood for fuel throughout the township. No nor or lignite veins were seen. There are no stone quarries. A few boulders and rolling stones were seen along the shore of Whitemouth lake and occasionally a large one in the muskegs. No minerals nor mineral-bearing rocks or outcroppings of any kind of rock were seen. Game of all kinds was very plentiful, such as moose, red deer, bears, wolves and small animals. Geese, ducks and other water-fowl were very numerous in Whitemouth lake and a few partridges were seen along the shore.—*L. Bolton, D.L.S., 1906.*

4. (*North outline.*)—Muskeg, cedar and tamarack swamps prevail with an occasional ridge of jack pine or poplar.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—The southwest corner of this township is broken by Whitemouth lake, which is generally shallow with a very muddy bottom in this portion. Whitemouth river takes its rise in the lake, and flows northerly through the township. There is a little dry land near the north shore of the lake and a little along the banks of the river, but most of the township is low spruce and tamarack swamps, on which the timber is very small, and a large proportion of it has been fire-killed. The township is not suitable for settlement.—*W. A. Ducker, D.L.S., 1902.*

This township was reached by the wagon road leading from Woodridge, a station on the Canadian Northern railway, to Whitemouth lake. This road crosses a succession of sand ridges. The soil of this township is sand with very little loam except in a few places along Whitemouth river, where there is a slight mixture of clay. The high land is principally high ridges. The balance of the township is very flat and swampy, a great deal of which is very wet muskeg. The subsoil in the swamps is generally of a sandy nature. In my opinion the soil of this township is not suitable for agricultural purposes. The township is timbered throughout. On the sand ridges it is chiefly jack pine. In the swamps there is some poplar, spruce and tamarack up to 14 inches in diameter. In the muskegs it is chiefly scrubby spruce and tamarack, a great deal of which is dead. Most of the timber in the township is small and suitable only for fuel. In a few spots along Whitemouth river there are some spruce, tamarack and balm of Gilead up to 12 inches in diameter. There are a few bluffs of cedar in the muskeg. There are fine hay meadows along Whitemouth river, where a number of parties have cut large quantities to feed their cattle during the winter. The water at Whitemouth river is not first-class, but can be used for domestic purposes. In the muskegs it is fairly good. There are no streams in the township except Whitemouth river, and a branch thereof rising in sections 35 and 36. This branch is larger than

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RANGE 14.—*Continued.*

the outlet of Whitemouth lake, and the water is fairly good. There are no water-powers, the country being too level. The climate is good and there are no summer frosts to injure small fruits, such as strawberries, gooseberries, blueberries and raspberries. The rainfall was sufficient for growing crops. The latter part of May and the first half of June was very showery and cloudy with heavy thunderstorms. Wood is plentiful throughout the township, but no coal nor lignite veins were seen. There are no stone-quarries. Some large and small boulders were met with in the muskegs and swamps and along the river banks. No minerals or mineral-bearing rocks nor outcroppings of any kind of rock were observed. Game of all kinds was very plentiful, such as moose, red deer, antelopes, bears, wolves and smaller animals. Ducks, geese and other water-fowl were very numerous on Whitemouth lake.—*L. Bolton, D.L.S., 1906.*

Nearly all the soil in this township is third-class, consisting mostly of a black

- 5.** loam with the exception of a few ridges, where a sandy loam is found. The surface is covered with heavy bush except in the muskegs, where a low willow scrub is found. The principal timber is spruce and tamarack, and on the ridges poplar and jack pine in addition. All the timber is equally distributed throughout the township and averages 7 inches in diameter. There is no hay in this section of country. All the water is of first-class quality and can be obtained easily either on the surface or by digging a very few feet. Whitemouth river, which is a stream flowing north and is about 30 to 40 feet wide and 2 to 4 feet deep, flows through the southwestern corner. There are no waterfalls or water-powers. The climate is the general Manitoba climate without any indication of summer frosts. Fuel is plentiful, consisting of spruce and tamarack principally, and can be obtained all through the township. There are no stone-quarries, minerals, coal nor lignite veins. Moose and black bears are about the only kind of game to be found, and these are very plentiful. The only trails found were winter roads and passable only during the winter months owing to the muskegs and swamps.—*J. Molloy, D.L.S., 1906.*

The soil in this township is mostly black loam, but as the township is nearly

- 6.** all spruce and tamarack swamps, the soil is only fourth-class. The whole of the surface is covered with bush, consisting principally of spruce and tamarack from 3 to 9 inches in diameter, equally distributed throughout the township. There is very little hay to be found and no water-powers, stone-quarries, coal nor lignite veins were seen. The water is all of first-class quality and can be had in any quantity all over the township at any time of the year. There are two small lakes on the north boundary of section 20 and one large lake on the north boundary of section 34. Fuel is very plentiful and either spruce or tamarack can be had in all parts of the township. Moose and black bears are very plentiful all through this section of country. The Dawson road leading to Ste. Anne, a station on the Canadian Northern railway, passes through the southern portion of township 7, range 14, in an east and west direction.—*J. Molloy, D.L.S., 1906.*

(*East outline.*)—Sections 36, 25 and 24 are swamp and muskeg, and are

- 7.** timbered with small tamarack and spruce. The remaining sections are alternately rocky, sandy ridges with burnt timber, and swamp with small tamarack and spruce.—*W. Pearce, D.L.S., 1875.*

(*South outline.*)—The country along this line is alternately swamp, and rocky or sandy gravelly ridges. There is considerable scattered cedar. Birch lake is intersected by this boundary.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—The soil in this township is mostly black loam or clay, but on account of its being nearly all a spruce and tamarack swamp, the greater part of

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

which is covered with water, the land is useless for farming purposes. The whole of the township is covered with heavy bush, consisting mostly of spruce and tamarack, equally distributed, and averaging about 7 inches in diameter. There is little or no hay except along Birch river, which flows through the western part of the township in a northerly direction. All the water throughout the township is of first-class quality, and can be had in any part at any time of the year without digging. There are no water-powers, stone-quarries, coal or lignite veins. Wood is very plentiful, and can be had in large quantities all through the district. Moose and black bears are about the only game found. The Dawson road passes through the southern part of the township and runs to Ste. Anne, a station on the Canadian Northern railway, where there are churches, stores, schools, and a post office.—*J. Molloy, D.L.S., 1906.*

(*North outline.*)—This boundary runs entirely through swamp which is timbered in most places with small tamarack and a few spruce and cedar.—
8. *W. Pearce, D.L.S., 1875.*

(*East outline.*)—The country along this line is all swamp or muskeg, except along the banks of Boggy river, and is timbered with small tamarack, spruce and cedar, some of which have been destroyed by fire. Along Boggy river, which flows in a westerly direction through section 1, there is some dry land, timbered with large poplar, spruce and tamarack, with a light sandy soil. The river is very crooked and has very little current. At the crossing of the line it is about 7 feet deep. The water is of very poor quality.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—There is very little land in this township fit for farming or grazing purposes, as it consists principally of spruce and tamarack swamp, and parts of it are very stony. The soil in the swamps is nearly all black or sandy loam. Nearly all of the township is thickly timbered with principally spruce and tamarack, and some cedar and poplar about equally distributed, and ranging in diameter from 4 to 10 inches. All the water is of first-class quality, and can be had in almost any part of the township at any time of the year without digging. Boggy river, a stream about 50 feet wide, enters the township in section 1, and runs in a westerly direction through sections 1, 2, 3 and 4. Fuel is very plentiful all through this section of country, consisting chiefly of spruce and tamarack. There are no stone-quarries, coal or lignite veins. The climate is the general Manitoba climate, without any indication of summer frosts. Moose, caribou and black bears are very plentiful. There are no trails of any kind leading through the township, but the Dawson road, running from the village of Ste. Anne, passes about 4 miles to the south.—*J. Molloy, D.L.S., 1907.*

All the land in this township is fourth-class, being nearly all swamp muskeg
9. with some rocks; it is practically unfit for agricultural or grazing purposes.

Nearly all the surface is covered with bush except a small portion in the south part of the township which is open muskeg. The bush consists principally of jack-pine, spruce and tamarack from 3 to 10 inches in diameter with tamarack and willow scrub. There is no hay. All the water is fresh and can be had at almost any time of the year in any part of the township without digging. There are no lakes, waterfalls or rapids. Fuel is very plentiful, and can be had in unlimited quantities all through this section of country. There are no coal or lignite veins nor minerals. Moose deer, caribou and black bears are very plentiful. There are only a few winter trails, which cannot be travelled in the summer.—*J. Molloy, D.L.S., 1908.*

(*East outline.*)—The country traversed by this line is alternately swamp and muskeg, or rocky ridges. The swamps and muskegs are generally wooded with small spruce and tamarack, and the ridges with pitch-pine,
10.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

spruce, tamarack, poplar and birch, some of which is of fair size. Much of the timber has been destroyed by fire. There is no soil except in small patches. Small lakes are numerous. The Canadian Pacific railway crosses the line in section 24.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—All the land, with the exception of 3 or 4 quarter-sections in the northwest corner of the township, is fourth-class. About 60 per cent of the surface is high rock varying in height from 10 to 50 feet and the remainder is spruce and tamarack swamps and muskegs with spruce, tamarack and willow scrub. All of the surface is covered with bush consisting of jackpine, tamarack, spruce and some poplar from 3 to 8 inches in diameter with scrub. There is very little hay. Water can be had any place where there are no rocks without digging. There are a few small creeks and 4 or 5 lakes, all containing good water. Brereton lake, a small portion of which is in section 36, is a large lake extending about 4 or 5 miles north and about 2 miles wide from east to west. The other lakes in the township are small covering about 75 or 100 acres each. Fish can be had in all these lakes, especially in Brereton lake, where they are very plentiful. There are no waterfalls or rapids from which power could be developed. The climate is the general Manitoba climate without any indication of summer frosts. Fuel, consisting of spruce, tamarack and jackpine, can be had all through this district. There are no indications of coal or lignite veins. There are no stone-quarries, all of the stone being granite or boulders. There are traces of gold to be found, some of the ore of which is reported to have assayed 3 dollars to the ton. One mining claim has already been taken up near the northeast corner of section 28. Moose and black bears are very plentiful here, and wolves abound in the fall and winter. Geese and ducks are plentiful in the lakes in the spring and fall. The Canadian Pacific railway passes through the northeast corner of this township. Rennie station is situated on section 24, where there is a post office and small store. The Grand Trunk Pacific railway passes through sections 36, 35, 34, 33, 28, 29 and 30, crossing the Canadian Pacific near the northeast corner of section 28. There are no trails except a few wood trails used in the winter to draw out cordwood.—*J. Molloy, D.L.S., 1908.*

(*Ranges 14 and 15.*)—Only lands in the vicinity of Brereton lake **10 & 11.** were surveyed in these townships. The country around the lake is rocky with many muskegs. The muskegs are covered with a thick growth of small spruce and tamarack, and this year were very wet. The rocky ridges are covered with a thick growth of small jackpine. In a few spots some sandy soil is formed which would no doubt produce vegetables. Brereton lake is a beautiful sheet of water about 3 miles long and in one place nearly 2 miles wide. The shore is generally rocky, but in some places there is a fine sandy beach. There are 17 islands, mostly rocky and well wooded. This lake abounds with the usual fish found in the west. Moose and bears are very plentiful in the surrounding woods, while small game, such as partridges and rabbits, are everywhere. The proximity of the lake to Winnipeg (being only 70 miles distant) and the ease with which it may be reached over the Grand Trunk Pacific railway will no doubt make Brereton lake a great summer resort. There have been some attempts made at mining, but up to the present time the results have not been encouraging to those engaged. A few settlers are endeavouring to raise cattle, but the pasturage is so limited that cattle-raising can never be carried on extensively.—*W. J. Deans, D.L.S., 1912.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

The soil in this township is mostly fourth-class and unsuitable for agricultural purposes as it consists mostly of rocks and swamps. The land is covered with timber and scrub, the timber being from 4 to 10 inches in diameter and consisting of jackpine, spruce, tamarack and poplar, equally distributed over the township. Fuel, both green and dry, is plentiful. There is little or no hay in this section of the country. No stone-quarries were found, but large rocks and boulders are very plentiful, and there is a continuous granite formation through the township. Game is abundant and consists mostly of moose, jumping deer and black bears. The only way to reach this district with horses is by way of the lakes in winter. The Grand Trunk Pacific railway runs a few miles south of this township.—*J. Molloy, D.L.S., 1909.*

(*North outline.*)—All the north boundary of this township is rough, rocky country, interspersed with muskegs. The surface has been swept by fire and is now covered with dead, standing and fallen timber and small green pitch pine. Whiteshell river crosses the north boundary of section 36. South of the line it expands into a lake about 2 miles wide, which extends into range 15. There are no water-powers in this township.—*B. J. Saunders, D.L.S., 1906.*

(*Subdivision.*)—There are no trails leading into this township, and the only way to reach it is by canoe from Rennie by way of the Rennie river or by following the waterway from Cross lake (accessible by both the Grand Trunk Pacific and Canadian Pacific railways in range 16) to White lake, which cuts into sections 36, 25 and 24 of this township. The soil is all fourth-class and of little value for agriculture. The surface is wholly covered with bush, mostly second-growth jack pine and poplar. Forest fires have, at one time, overrun the greater part of the township. The surface is hilly and broken, the principal features being the hills and ledges of gneiss which extend throughout the township. These hills are sparsely covered with vegetation, and are interspersed with small swamps. There is no merchantable timber. No hay grows in this township. Fresh water is plentiful. The Rennie river crosses the southern part of the township. This river averages 24 feet in width and 3 feet in depth, and flows about 3 miles per hour. During periods of high water it overflows its banks to the depth of 3 feet in the western part of the township. The water in White and Cabin lakes is of good quality, and fresh water may also be obtained in any of the small swamps throughout the township. There are several small rapids on the Rennie river, but the fall is slight and the volume insufficient for developing much power. The climate is the usual eastern Manitoba climate. Summer frosts occur but rarely. Sufficient wood for fuel purposes may be obtained on nearly every section, especially dry timber. No coal nor lignite veins exist. There are no quarries, but coarse gneiss is found everywhere, either exposed or thinly covered with soil. No valuable minerals have been discovered. Moose, caribou, deer, bears, partridges, ducks, geese and the smaller fur-bearing animals are plentiful. Jackfish and wall-eyed pike abound in White and Cabin lakes.—*J. Molloy, D.L.S., 1911.*

This township may be reached by canoe from Lac du Bonnet by way of the 13. Winnipeg river. It may also be reached by either the Whiteshell river or the Rennie river. The township is, as a whole, unfit for settlement, as the greater part has been burned over, and only the remnants of the timbered area remain in isolated places. The surface is a succession of rocky ridges up to 100 feet in height, some rising perpendicular for 50 feet. Along the northern boundary there is some fairly level land which is heavily timbered with poplar, jackpine and spruce. Along both the Whiteshell and Rennie rivers considerable areas of hay land exist, but in years of high water on Winnipeg river it is probable that a certain amount is inun-

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

dated. The rivers are well stocked with jackfish, whitefish, sturgeon and pickerel. There are no economic minerals, stone-quarries or valuable water-powers. Moose, deer, bears, caribou, lynxes and wolves are found.—*G. H. Watt, D.L.S., 1907.*

14. The township is reached by canoes from Kenora or Lac du Bonnet on the Winnipeg river. The soil is not generally good. The township is much broken by rough jackpine, rocky ridges, some of them burned over and covered with deadfall, and spruce and tamarack muskegs. Some ties were taken out 6 or 8 years ago, and though occasional spruce remain they are not valuable. Some of the tamarack in the muskegs is large and suitable for piles. There is also much heavy sound poplar, tall and straight, growing within a mile of the river. Hay is to be found along the banks of Tie creek and is of fair quality. This creek is a large, wide stream, the water of which is good at all seasons of the year. It is used to a considerable extent by tourists who go by canoe from Kenora to Lac du Bonnet, or even farther to Fort Alexander, thence by steamer to Selkirk and then by train to Winnipeg. Sturgeon falls may be used as a power site, and also the narrows in several places might be dammed and power developed. Whiteshell river is navigable for boats drawing 2 feet of water except for a small rapid full of boulders, about one-quarter of a mile from its mouth. The rapid is quite submerged at the time of high water in the Winnipeg river. There were no summer frosts, and but for the continued downfall of rain in July, August and September, we had fine weather. The rock everywhere is the same pink granite and contains no mineral of economic value. Game, consisting of moose, deer, caribou, bears, lynxes and the smaller animals is found, also geese and ducks along the streams.—*G. H. Watt, D.L.S., 1907.*

(*South outline.*)—This line runs mostly over a country composed of rocky ridges separated by muskegs or alder swamps. Near the Winnipeg river there is a strip of heavy poplar and balsam, but elsewhere the timber is mostly unfit for lumbering. The soil is mostly fourth-class. There are no water-powers, stone-quarries nor minerals, and no summer frosts were experienced. Game and fish are plentiful. All the water is fresh and good.—*G. H. Watt, D.L.S., 1907.*

(*Subdivision.*)—This township was reached from township 15, range 15, crossing Winnipeg river immediately above Point du Bois falls. The only good soil is found in small patches between the rocky ridges in the north half of the township, and this is not suited for agricultural purposes. A great deal of the west half of the township is swamp and muskeg. The surface is covered with jackpine, spruce, tamarack, poplar, birch and balsam. The swamps are wooded with spruce and tamarack up to 8 inches in diameter, and the ridges with jackpine, spruce, poplar, birch and balsam from 3 to 12 inches, but no timber suitable for lumbering purposes is found. No hay was noticed. Fresh water is abundant in the marshes, lakes and swamps. Winnipeg river runs scutherly through the eastern tier of sections; the shores are high and rocky, and the land is not liable to be flooded. Point du Bois falls are in the centre of section 36. Here the corporation of the city of Winnipeg is developing power. By using the rapids below the falls and by the construction of a dam, the effective head will be 45 feet and the proposed development is 40,000 horse-power. At the time of survey (March), a small camp had been erected at the site and a portion of the land cleared. Slave falls are situated in the southwest corner of section 12. Here the river passes between two rocks, and is less than 300 feet wide. A considerable amount of power could easily be developed here by the construction of a dam. The climate at the time of the survey was the ordinary winter weather of Manitoba. Fuel is everywhere abundant. No stone-quarries nor minerals were found. The game consists of moose and caribou.—*J. L. R. Parsons, D.L.S., 1907.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14.—*Continued.*

(*North outline.*)—This line runs through rock interspersed with muskeg.

- 16.** The surface is rolling and is covered chiefly with poplar, spruce and pitch-pine, averaging about 8 inches in diameter. The country is entirely unfitted for agriculture. Winnipeg river flows through the southeast corner of the township. This part of the river is a succession of falls and rapids, rendering it particularly suited for the development of power.—*B. J. Saunders, D.L.S., 1906.*

(*Subdivision.*)—This township was reached from Lac du Bonnet, a station on the Canadian Pacific railway, by travelling on the ice across lac du Bonnet to the mouth of Oiseau river, thence up the river for a distance of 2 miles, and from there by our own trail eastward to the northwest corner of the township. It is a good winter trail. Practically no soil is exposed in this township. The swamps and muskegs, being rock-bound, cannot be drained, and therefore are not suitable for agricultural purposes. The greater part of the township is composed of rocky ridges. The surface is covered with jack pine, spruce, tamarack, poplar and birch. The swamps are wooded with spruce and tamarack from one to eight inches in diameter, and the ridges with jackpine of a similar size, and scattered clumps of poplar and birch from three to ten inches in diameter. Much windfall and fire-killed timber is found, but none suitable for lumbering purposes. No hay is found. Fresh water is abundant in the marshes, lakes and swamps. The Winnipeg river occupies portions of sections 12, 1 and 2. This part of the river is in the form of a lake-like expansion with numerous islands and high rocky shores. The land is not liable to flooding to any extent. Contours have been taken, however, to determine the flooding areas by the corporation of the city of Winnipeg, in connection with the power development at Point du Bois falls in section 36, township 15, range 14. The weather during the survey (January) was the usual winter weather of Manitoba, the lowest point reached by the thermometer being 53 degrees below zero. Fuel is everywhere available in the form of windfall, dead and fire-killed trees.. No coal was found.. Rock-in-place is found everywhere, but no quarry stone nor mineral were observed. Moose, lynxes and minks, constitute the game.—*J. L. R. Parsons, D.L.S., 1907.*

This township may be reached by canoes in summer and by sleighs in

- 17.** winter from Lac du Bonnet, a station on the Canadian Pacific railway, via the Winnipeg river, lac du Bonnet and the Oiseau river. The whole township may be traversed from east to west on this river. Some small tracts of land with good clay soil are to be found along the Oiseau river and Peterson creek, one of its tributaries. This creek is nearly parallel to and about one and one-half miles north of the river. It has an average width of about 14 feet, a depth of 4 feet and a current of about 2 miles per hour. The greater part of the township is either rocky or swampy. The surface is heavily rolling and covered with a thick growth of timber, black spruce and tamarack in the swamps, pine on the rocky portions and poplar, balsam, birch, white spruce and willow in the portions having soil sufficiently deep and dry. Scattered throughout the township in small patches, timber from 10 to 16 inches in diameter is found, which consists of pine, spruce, tamarack and poplar. This is suitable for sawing into lumber and comprises in all about 8,000,000 feet b.m. A small quantity of hay may be obtained along both sides of the river in dry seasons. In any other places where grass was abundant, thick willows were found to be growing also. All of the water is fresh and good and the supply in the river and larger creeks is permanent. The Oiseau river enters the township in section 13 and flows south-westerly and westerly, leaving in section 6. Falls exist in sections 5, 7 and 14, and except in the neighbourhood of these, the current is exceedingly sluggish. Power could be developed by the construction of

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 14—*Concluded.*

dams but the amount developed would be much smaller in winter than in summer. The climate is similar to that of Winnipeg, with no summer frosts. Wood for fuel is plentiful in every quarter-section. No coal nor lignite veins were discovered. Broken granite is very plentiful all over the township and may be utilized for building purposes. No minerals were observed. Rabbits, partridges, deer, moose and timber wolves were plentiful, while several kinds of fish may be caught in the Oiseau river. Small fruits, such as black currents, gooseberries, cranberries, blueberries, wild plums and choke-cherries, are abundant.—*J. Francis, D.L.S., 1913...*

(South two-thirds.)—No trails reach this township, but the township to the

18. south may be reached by travelling in canoes up the Oiseau river from lac du Bonnet. This river crosses the southerly half of township 17, range 14, from east to west, and has two or three falls where canoes have to be portaged. Most of the land is either rocky or swampy and only a few small patches of good clay soil exist. These will grow grains and grasses indigenous to the settled parts of Manitoba. Small timber, suitable for cordwood or pulpwood, grows in the swamps and on the rocky country. The surface is rolling or hilly and generally thickly covered with a growth of small pine, spruce, tamarack, poplar, birch and scrub. This timber, averaging from 2 to 8 inches in diameter, is found growing more or less in every quarter-section. There is no hay. All of the water is soft and good. There are no streams and consequently no water-powers. No land is liable to be flooded. The climate is similar to that of the rest of southeastern Manitoba. Large quantities of wood, fit for fuel, may be obtained in every quarter-section. No coal nor lignite veins were discovered. Stone, mostly granite, is plentiful and is suitable for building purposes. No minerals were observed. Rabbits, jumping deer, moose and partridges are plentiful. Small fruits, such as black currants, gooseberries, cranberries and blueberries are abundant.—*J. Francis, D.L.S., 1913.*

RANGE 15.

The soil in this township would nearly all rank as second-class, being a black

1. sandy loam of good depth. The whole of the township is heavily timbered, with the exception of parts of sections 29, 30, 31 and 32. There is a large, open muskeg in these sections running in a northeasterly direction, with an average depth of water of about two feet. The soil would all be suitable for farming purposes when cleared of the timber. The timber is about equally distributed throughout the township, and varies from 5 to 15 inches in diameter. Poplar, spruce and tamarack are about the only kinds of timber to be found, although there is some small birch. All the water is of first-class quality, and can be had in almost any part of the township by digging a few feet. There are no creeks or streams. The land is not liable to be flooded. The climate is the general Manitoba climate, with no indication of summer frosts. Fuel is very plentiful all through this section of country, consisting principally of spruce, tamarack and poplar. There are no coal or lignite veins, stone-quarries or minerals. Moose and jumping deer are about the only kinds of game to be found, and are plentiful. The main line of the Canadian Northern railway crosses the township in a straight line from the northeast corner of section 7 to the northeast corner of section 1. The railway siding, Gravel Pit spur, is in section 7 of the township to the east. The town of Sprague, where there is a station, store, post office, and school, is about 3 miles west of this township.—*J. Molloy, D.L.S., 1907.*

All the soil in this township would rank as third-class, and the greater part

2. of the township is swamp and muskeg with the exception of a few narrow ridges. None of the land would be fit for farming or grazing purposes. The

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 15.—*Continued.*

whole of the surface is covered with bush with the exception of a few quarter-sections in the southwest corner, which are open muskeg and very wet. The bush consists principally of spruce and tamarack, varying in size from 3 to 15 inches in diameter. There is a little poplar, jackpine and cedar to be found, but only in very narrow strips. There is no hay except in sections 10, 11 and 12, along Reed river, a small stream varying in width from 3 to 12 feet. All the water is fresh and can be had almost anywhere on the surface. There are no water-powers available. Fuel can be had in unlimited quantities all through this section of country, consisting principally of spruce, tamarack and some poplar, cedar and jackpine. There are no stone-quarries, coal or lignite veins nor minerals of any kind to be found. Moose and black bears are the only kinds of game to be found. The moose are very plentiful. There are no roads or trails of any kind running through this township except a winter timber road which runs from Sprague and passes through sections 3, 10, 11 and 12. This is impassable except in winter. The town of Sprague, the nearest station, is situated on the Canadian Northern railway, in township 1, range 14, and contains a store, post office and a number of settlers.—*J. Molloy, D.L.S., 1907.*

3. The land in this township is all third- or fourth-class, consisting principally of spruce and tamarack swamps and muskeg. The soil is black loam or clay but is useless for farming or grazing purposes on account of it being so wet and covered with bush. Nearly all of the surface is covered with bush, consisting principally of spruce and tamarack, varying in size from 3 to 15 inches in diameter. There is a little poplar to be found averaging from 5 inches in diameter and considerable scrub and underbrush. The timber is equally distributed throughout the township. There are no hay meadows. The water is all fresh, and can be had on the surface in almost any part of the township at any time of the year. There are no streams of any kind. Fuel is very plentiful, and can be had all through this part of the country, principally spruce and tamarack, and small quantities of poplar, jackpine and cedar. There are no stone-quarries, coal or lignite veins. Moose and black bears are the only kinds of game to be found. There are no trails leading into this township, and it is impossible to travel through this district with teams, except in the winter time. Sprague, situated in township 1, range 14, on the Canadian Northern railway, is the nearest village.—*J. Molloy, D.L.S., 1907.*

4. (*North outline.*)—Muskeg, cedar and tamarack swamps prevail, with an occasional ridge of jack pine or poplar.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—Nearly all the soil in this township is fourth-class and is unfit for farming purposes. The surface is nearly all spruce and tamarack swamps with some large open muskegs, which are mostly covered with water. The average diameter of the timber which is principally spruce and tamarack with a few poplar ridges would be about 5 or 6 inches. It is equally distributed throughout the township except in sections 2, 3, 9, 10, 11, 15 and 16 where there is a large open muskeg. There is no hay in this township. All the water is fresh and can be found in almost any part of the township at any time of the year on the surface or by digging a few feet. The only stream to be found crosses the north boundary of section 31, a creek about 12 feet wide and 2 feet deep. There are no water-powers, stone-quarries, coal or lignite veins to be found in this district. Fuel can be had in unlimited quantities all through this section of the country, consisting principally of spruce and tamarack. Moose and black bears are the only kinds of game to be found. There are no trails passing through this township, and it is almost impossible to get into this section of country except in winter.—*J. Molloy, D.L.S., 1907.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 15.—*Continued.*

The land in this township is all fourth-class and is unfit for farming or grazing

- 5.** purposes, being made up principally of spruce and tamarack swamps, which generally are under water except in a very dry season. Nearly all of the township is covered with heavy bush, spruce and tamarack, averaging about 8 inches in diameter, with some cedar, balsam, jackpine, poplar scrub and underbrush, equally distributed throughout the township. There is no hay. The water is all first-class and can be had at any time of the year either on the surface or by digging a few feet. There is a creek, about 12 feet wide and 2 feet deep, crossing the south boundary of section 6. There are no water-powers available. Fuel is very plentiful all through this section of country, principally spruce and tamarack and some poplar and jackpine. There are no stone-quarries, coal or lignite veins nor minerals of any kind. Moose and black bears are the only kinds of game to be found and are very plentiful. There are no trails or roads of any kind leading into this township.—*J. Molloy, D.L.S., 1907.*

The land in this township in its present condition is useless, as it is almost

- 6.** completely covered with water from 6 inches to 2 feet deep. There is a large muskeg in the north and northeastern part of the township, which is impassable at any time of the year as it is a floating bog and dangerous for man or beast. The soil is all black loam and has a good depth, but is very wet and covered with spruce and tamarack swamps. With the exception of the large muskeg spoken of, the whole township is heavily timbered, mostly with spruce, tamarack and some cedar and poplar averaging about 7 inches in diameter. All the water is first-class and can be had in any part without digging at any time of the year. There are no water-powers to be found. Fuel is very plentiful all through this district, consisting principally of spruce and tamarack. There are no stone-quarries, coal or lignite veins. Moose are about the only kind of game to be found and they are very plentiful. The Dawson trail, running from Ste. Anne, a town on the Canadian Northern railway, runs through the northern tier of sections, but it is impassable in this township, as it is mostly covered with water from 1 to 2 feet deep.—*J. Molloy, D.L.S., 1907.*

(*South outline.*)—Sections 1 and 6 are dry and rocky, and timbered with

- 7.** tamarack, spruce, poplar, balsam and cedar, much of which, however, has been killed by fire. The remaining sections are mostly swamp or muskeg. The swamps are generally timbered with small tamarack and spruce, nearly all of which is dead.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—The land in this township is useless for farming or grazing purposes, as it is all bush and covered with water in swamps and muskegs from 6 inches to 2 feet deep, except in places where there are large rocks, which rise out of the muskeg, and a few ridges. The soil is nearly all a black loam and would be good farming land if there was any possible way of having it drained. Nearly all of the township is heavily timbered with spruce, tamarack, cedar, birch, balsam, jack pine and some poplar. The average diameter of the timber is about 7 inches, and is equally distributed throughout the township except in the southwest corner which is principally muskeg and floating bog with willow scrub and tamarack about 4 inches in diameter. All the water is first-class and can be had any place in the township at any time of the year. Boggy river, a stream averaging about 15 feet wide and 5 feet deep, passes through the northwest corner. Fuel, consisting of spruce, tamarack and poplar, cedar, birch and pine, can be had in unlimited quantities through this district. There are no stone-quarries, but large boulders and ridges are quite numerous. There are no coal or lignite veins. The climate is the general Manitoba climate. Moose and caribou are about the only kinds of game to be found. They are very plentiful through this district

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 15.—*Continued.*

The Dawson trail leading to Ste. Anne, a town on the Canadian Northern railway, passes through the northern part of the township to the south. There are no trails running through this township and it would be impossible to take a horse into it.—*J. Molloy, D.L.S., 1907.*

8. (*North outline.*)—The country along this line is nearly all swamp, and is timbered with small tamarack, spruce and a few scattered cedar. There are occasional small areas of rocky ground where the timber is generally fire-killed.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—There is scarcely any arable land in this township, as it consists principally of swamps and rocks. All the swamps contain water from 6 inches to 1½ feet deep. The soil is nearly all a black loam. All the township is heavily timbered with spruce, tamarack and cedar, and some spots with jackpine, birch and poplar, where there are rocks. All the timber varies in diameter from 5 inches to 2 feet. The water is of first-class quality and can be had at any place in the township at any time of the year without digging. Boggy river, a stream about 50 feet wide and from 5 to 7 feet deep, runs through the southwest corner. Fuel is very plentiful all through this part of the country, consisting of spruce and tamarack. There are no stone-quarries, coal or lignite veins nor water-powers in this township. The climate is the general Manitoba climate. Moose and caribou are about the only kind of game to be found. They are very plentiful all through this district. There are no trails of any kind leading into this township, and it would be impossible to get a horse within a distance of 6 or 8 miles.—*J. Molloy, D.L.S., 1907.*

Nearly all the land in this township is fourth-class, and is unfit for agricultural or grazing purposes. There is no arable land to be had; it is all either rocks or swamps. All of the surface is covered with bush, consisting principally of jackpine, spruce and tamarack from 3 to 8 inches in diameter with jackpine and willow scrub and brûlé. The different kinds of timber are equally distributed throughout the township. The jackpine is found on the rocks and spruce and tamarack in the swamps. There is little or no hay in this district. Water is very plentiful in the swamps, small lakes and connecting creeks. There are 5 or 6 small lakes in this township. All the water is of first-class quality. There are no waterfalls or rapids. Fuel is very plentiful, and consists principally of spruce, tamarack and jackpine, both green and dry. There are no coal or lignite veins. Granite stone and boulders are very plentiful. Both the Canadian Pacific and the Grand Trunk Pacific railways pass through the township to the north. There are no trails of any kind passing through this township. Moose, caribou and black bears are very plentiful all through this section of country, as well as other small fur-bearing animals, such as minks and otters.—*J. Molloy, D.L.S., 1908.*

The land in this township is useless for farming or grazing purposes as three-quarters of the surface is covered with rock and the remainder is spruce and tamarack swamps. The rocks are from 25 to 60 feet high. All the township is covered with bush consisting of jackpine, spruce and tamarack from 3 to 8 inches in diameter and scrub, all equally distributed through the township. There is no hay to be found. Water is very plentiful in the swamps at any time of the year. There are a number of creeks and 7 or 8 good-sized lakes containing good water. There are no falls or rapids from which any power could be developed. The climate is the general Manitoba climate with no indications of summer frosts. Fuel is very plentiful all through this district and consists of spruce, tamarack, jackpine and some poplar, although all the large timber has been cut. There are no

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 15.—*Continued.*

indications of coal or lignite veins, neither are there any stone-quarries. Moose, black bears and wolves are very plentiful. Geese and ducks are plentiful for a time in the spring and fall. The Canadian Pacific railway runs through the centre of the township. Telford station is about a mile east and Rennie about a mile west of the township lines. The Grand Trunk Pacific railway passes along the north boundary. There are no roads except a few winter trails used for drawing wood.—*J. Molloy, D.L.S., 1908.*

10 & 11. (See report on townships 10 and 11, range 14, east of the Principal meridian.)—*W. J. Deans, D.L.S., 1912.*

This township is reached by the Grand Trunk Pacific railway which passes **11.** through the southeast corner of the township. The soil is all fourth-class and is wholly unsuited for agriculture. The surface is broken, rocky hills, alternating with stretches of swamp. All of the township is covered with timber, principally jackpine, poplar, spruce and tamarack, averaging about 6 inches in diameter. Practically all of the merchantable timber has been cut. There is some coarse hay at points along the Rennie river, but the quantity is inconsiderable and of poor quality. The water in the various lakes, streams and swamps in this township is of very good quality, with the exception of Brereton lake, whose water is filled with a fungus growth during the summer months. The supply of water is abundant. The principal stream is the Rennie river, which passes through the northwest corner of the township and drains Brereton lake, and about two-thirds of the township. This river averages about 20 feet in width and 4 feet in depth and flows, approximately, 3 miles per hour. It overflows its banks to a depth of 3 or 4 feet in places during periods of high water. The volume and fall are not sufficient to generate much power. The climate is the usual Manitoba climate. Summer frosts occur occasionally. Wood, in sufficient quantities for fuel purposes, can be obtained anywhere throughout the township. There are no coal or lignite veins. There are no quarries, but rock is very much in evidence. Hills and ledges of coarse gneiss occur, usually thinly covered with soil but bare in places where forest fires have passed. No valuable minerals have been found. Moose, caribou and bears frequent this township as well as the smaller fur-bearing animals. Partridges and rabbits are abundant, also waterfowl in season. Brereton lake is fairly well supplied with jackfish and maskinonge.—*J. Molloy, D.L.S., 1911.*

(*North outline.*)—This line crosses Whiteshell river twice within 30 chains.

12. The stream is about a chain and a-half wide. The country here is level and covered with alder and willow. Near the centre of the north boundary of section 35 the country changes, becoming very rough and rocky. The ridges are covered with pitch-pine while the depressions are filled with spruce, poplar, birch, tamarack and balsam, which continue to the northeast corner of the township. The soil is third-class.—*B. J. Saunders, D.L.S., 1908.*

(*Subdivision.*)—The only practicable route for entering this township is by way of the Whiteshell river from Cross lake. There is a continuous waterway, navigable for small boats or canoes, but interrupted by several short portages necessitated by rapids. The soil is not adapted to agricultural purposes, consisting largely of bare rocks and swamps with small scattered tracts of arable land, which are heavily timbered. The township is well supplied with timber, although there is none of commercial value. Jackpine, poplar, tamarack and spruce, averaging 6 inches in diameter, may be found in almost any section, and although many large trees are found, there is no tract of large timber. There is no hay of any account. The many

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 15.—*Continued.*

lakes and creeks afford an abundant supply of excellent water. The chief stream is the Whiteshell river, which enters the township in the north boundary of section 35. It flows into Little Whiteshell lake and from this lake into White lake. This river averages 60 feet in width and 6 feet in depth, and flows about 3 miles per hour. There is an abrupt fall of 8 feet on this river in section 32, and by damming at this point 800 or 900 horse-power could be secured. The climate is the general Manitoba climate; summer frosts occur occasionally. Wood suitable for fuel purposes can be obtained in any section. There are no coal or lignite veins. There are no stone-quarries, but the coarse granite, common to this region, occurs throughout the township. No minerals of commercial value were found. Game is very plentiful, and consists of moose, deer, caribou, bears, partridges, wild ducks and geese. There is good fishing in all the lakes, pike, jackfish, yellow perch and American carp being very plentiful.—*J. Molloy, D.L.S., 1911.*

15. This township was reached by our own trail southerly through the centre of township 16, range 15. There is very little good soil in the township, the greater part being composed of rocky ridges. Between these ridges are swamps and muskegs in which the soil is chiefly black loam on a clay subsoil. There is no farm land. The surface is well wooded, being covered with jackpine, spruce, tamarack, poplar and birch. The swamps are wooded with spruce and tamarack up to 8 inches in diameter, and the ridges with jackpine and scattered poplar, birch and balsam from 3 to 10 inches in diameter. The shores of the lakes usually support timber of larger and better quality, but no timber suitable for lumbering purposes is found. There is no hay in this locality. Fresh water is everywhere obtainable in the swamps, muskegs and numerous lakes. Winnipeg river flows through the western parts of sections 31, 30 and 19. The west boundary of section 19 crosses Eightfoot falls. Here the river passes between 2 high rocks, and a considerable amount of power could be easily developed by a dam, which would increase the head to 15 or 20 feet. The climate is the ordinary weather of Manitoba. Fuel is abundant in the form of windfall, dead and fire-killed trees, but no coal was found. Neither stone-quarries nor minerals were observed. Moose, caribou, lynxes, minks and fishers are the only game.—*J. L. R. Parsons, D.L.S., 1907.*

16. (*North outline*).—The country along this line is mostly rock with some muskeg and low ground, and is quite unsuitable for agriculture. The surface is rolling and is covered chiefly with poplar, pitch-pine, spruce and birch, averaging from 6 to 8 inches in diameter. There is a lake in the northwest corner of the township. Winnipeg river enters at the east of the township, about a mile and one-half south of the north boundary, and flowing southwest leaves the township at the southwest corner. There is a fall about the centre of the township, from which considerable power could be developed.—*B. J. Saunders, D.L.S., 1906.*

(*Subdivision*).—This township was reached by way of a surveyors' trail along the north boundary of township 16, range 14, and thence over the ice of Saunders lake. This is a good winter trail. There is only a small proportion of soil in the township, the greater part being composed of rocky ridges. Between these ridges are swamps and muskegs in which the soil is chiefly black loam on a clay subsoil. The surface is covered with jackpine, spruce, tamarack, poplar and birch. The swamps are wooded with spruce and tamarack up to 8 inches in diameter and the ridges with jackpine of similar dimensions with scattered clumps of poplar and birch from 3 to 10 inches in diameter. The land along the north bank of Winnipeg river supports a good growth of poplar, spruce and birch from 4 to 12 inches in diameter, but no timber suitable for lumbering purposes exists. No hay is found in this township. Fresh water is

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Concluded.*

abundant in the marshes, swamps and creeks. Winnipeg river crosses the township almost diagonally from the northeast to the southwest corner where it takes the form of several lake-like expansions containing a number of islands. Lamprey falls are situated in section 23. The descent is about 12 feet, but is not well suited for the development of power, since there are only short rapids above and below the falls, and the present head may be decreased when the dam at Point du Bois is completed. No other water-powers occur. The weather during the survey (February) was the usual winter weather of Manitoba. Fuel is everywhere available in the form of windfall, dead and fire-killed trees. No coal was found. Rock-in-place is everywhere exposed on the surface, but no quarry stone nor minerals were found. Moose, caribou, lynxes and minks are the only game.—*J. L. R. Parsons, D.L.S., 1907.*

This township may be reached in summer by canoe and in winter by dog

17. sleighs from Lac du Bonnet, a station on the Canadian Pacific railway, by way of the Winnipeg river, lac du Bonnet and the Oiseau river. There are three portages on the Oiseau river before reaching this township. Small, thickly-timbered tracts of clay soil are found along the river and creek valleys, but the greater part of the township is either rock or swamp. The surface is either heavily rolling or hilly, and is covered with a heavy growth of small timber, fire-killed in section 36 and the north half of section 35. Scattered throughout the township, but more particularly in the small valleys and hollows formed by the river and numerous small creeks, there may be found in thin patches, pine, spruce, poplar, tamarack and balsam, from 6 to 12 inches in diameter. About 25,000 ties could be obtained from this supply. There is no hay. All of the water is soft and good, and the supply is permanent in the river and lakes. The Oiseau river, entering the township in section 25 and leaving in section 18, is a stream from 66 to 132 feet wide and 6 to 10 feet deep, and has a very slow current, except in sections 21 and 22, where falls occur. By the construction of dams a small amount of water-power could be developed. The climate is similar to that of Winnipeg, with no summer frosts. Wood for fuel may be obtained in every quarter section. There should be over 80,000 cords of wood and several car loads of fence posts obtainable in this township. No coal or lignite veins were seen. There are no stone-quarries, but plenty of granite rock is found everywhere. No minerals were observed. Fish are found in the river and lakes, while moose, jumping deer, rabbits and partridges are plentiful. Small fruits, such as wild plums, black currants, gooseberries, cranberries and blueberries are found along the river and creek valleys.—*J. Francis, D.L.S., 1913.*

RANGE 16.

The soil in this township is about fourth-class, being mostly all spruce and

1. tamarack swamps, and some open muskeg. The open muskeg is found mostly in sections 1, 12 and 13 and in the southwest corner. There are some poplar ridges and the soil is sandy loam. All the land except the open muskeg is covered with timber up to 12 inches in diameter. There is no hay land. The water is fresh and can be had on the surface or by digging a foot or two in any part of the township. There are no streams of any kind to be found. The climate is the general Manitoba climate with no indication of summer frosts. Fuel, consisting of spruce, tamarack and poplar, both green and dry, is very plentiful all through this section of the country. There are no streams of any kind to be found. The climate is the general Manitoba of moose, jumping deer and black bears, is very plentiful. The Canadian Northern railway passes along the north boundary of sections 6 and 5 and leaves the township in the south boundary of section 4. There are no trails in this section of country except a few winter trails.—*J. Molloy, D.L.S., 1909.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 16.—*Continued.*

This township is all fourth-class, being mostly covered with tamarack and spruce swamps, except along the banks of Reed river, where there is a poplar ridge, but this only extends for a short distance from the river. All the land is covered with timber up to 10 inches in diameter. The timber is mostly spruce, tamarack and some poplar, equally distributed throughout the township. There is no hay land except along the banks of Reed river. All the water is fresh and can be had almost everywhere on the surface without digging. There are no waterfalls or rapids, as the township is mostly level, being slightly undulating only in a few places. The climate is the general Manitoba climate with no indication of summer frosts. Fuel is plentiful in all parts of this district, consisting of both green and dry wood in unlimited quantities, principally spruce and tamarack. There are no stone-quarries or minerals of any kind. Moose, jumping deer and black bears are very plentiful. There are no trails of any kind except one or two winter trails. Gravel Pit Spur, on the Canadian Northern railway, is the nearest station, being in section 7, township 1, range 16.—*J. Molloy, D.L.S., 1909.*

Nearly all the land in this township is fourth-class with the exception of a few scattered ridges which, on account of the surrounding country being so wet, it would be impossible to reach. The land is not suitable for agricultural purposes, as all the surface is timbered with spruce, tamarack, poplar and under-brush. The best of the timber has been cut for lumber. What is left varies in size from 3 to 10 inches in diameter, and is about equally distributed throughout the township. There is no hay in this district. All the water is fresh and can be had in almost any part of the township without digging. There are no streams or waterfalls of any kind, but Moose lake, situated in sections 13, 14, 23 and 24, contains fresh water. The climate is the general Manitoba climate and there are no indications of summer frosts. No minerals of any kind, coal or lignite veins nor stone-quarries were noted. Fuel consisting of tamarack, spruce and poplar is plentiful all through the district, either green or dry. Moose, deer and bears are very plentiful as well as part-ridges. There are no trails in this part of the country, as it would be impossible to travel there in the summer season.—*J. Molloy, D.L.S., 1909.*

4. (*North outline.*)—Muskeg, cedar and tamarack swamps prevail with an occasional ridge of jack pine or poplar.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—The land in this township is all fourth-class and is unfit for agricultural or grazing purposes, as it consists mostly of swamps and muskegs with a few ridges. The township is covered throughout with bush and scrub, the timber being from 3 to 10 inches in diameter, and consisting principally of spruce and tamarack with some poplar, cedar and birch. There is scarcely any hay to be found except in places that are so wet and soft that it would be impossible to cut it. All of the water is fresh and can be had at any time of the year in almost any place without digging. There are no streams to be found but there is a lake on sections 1 and 2, the water of which is fresh. The climate is the general Manitoba climate, but this district is subject to frosts almost every month in the year. Fuel, consisting of spruce and tamarack, both green and dry, can be had in unlimited quantities all through this section of country. There are no coal or lignite veins to be found, neither stone-quarries nor stone of any kind. Moose, caribou and black bears are about the only kind of game, and they are plentiful. There are no trails leading to this township and it would be impossible to use any except in the winter when the ground is frozen.—*J. Molloy, D.L.S., 1909.*

5. (*East outline.*)—This line passes through muskeg and swamp land. In section 25 the Dawson road is crossed.—*J. L. Cote, D.L.S., 1898.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 16.—*Continued.*

(*Subdivision.*)—All of the land in this township is fourth-class, being spruce, tamarack, or cedar swamp with a few ridges and open muskegs covered with willow, tamarack and spruce scrub. The township could not be used for agricultural purposes. The timber is from 3 to 12 inches in diameter and is equally distributed throughout the township. Parts of the township have been burnt over during the past years. There is no hay to be had in this section of country. Water is very plentiful, is of first-class quality and can be had in almost any part of the township without digging, and at any time of the year. There are no creeks or lakes and no rapids or waterfalls from which power could be developed. The surface is level with the exception of a few ridges a few feet high. The climate is the general Manitoba climate but the district is subject to summer frosts. There are no stone-quarries of any kind, coal, nor lignite veins, but wood fuel can be had in unlimited quantities, both green and dry, consisting principally of spruce and tamarack. Moose, caribou and black bears are the principal game, besides a few small fur-bearing animals. The Dawson trail crosses section 36, running in a southeasterly direction.—*J. Molloy, D.L.S., 1909.*

This township consists principally of spruce and tamarack swamps with a few narrow ridges of poplar, some cedar and willow with spots of open muskeg. The soil is all fourth-class and could not be used for agricultural purposes. The timber is from 2 to 10 inches in diameter and is equally distributed throughout the township. There is no hay to be had in this district. Water is very plentiful and can be had in almost any part of the township at any time of the year, either on the surface or by digging a few feet, and it is all of first-class quality. There are no waterfalls or rapids from which power could be developed. Nearly all the land is level with the exception of a few ridges, which rise a few feet. The climate is the general Manitoba climate, but somewhat subject to summer frosts through this section of country. There is no stone of any kind, and no minerals, coal or lignite veins. Fuel consisting principally of spruce and tamarack, both green and dry, can be had in unlimited quantities all through this township. Moose, caribou and black bears are very plentiful and also some smaller fur-bearing animals, such as minks and martens. The old Dawson road runs through the township, entering near the southeast corner of section 2 and leaving the township near the northwest corner of section 30.—*J. Molloy, D.L.S., 1909.*

(*East outline.*)—The country along this line is mostly swamp, with a dense growth of spruce, cedar and tamarack, which in the drier parts is mixed with poplar and birch.—*W. Pearce, D.L.S., 1875.*

(*South outline.*)—The character of the country along this boundary is similar to that on the east outline.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—Nearly all of this township is spruce, tamarack or cedar swamp, with a few small ridges of birch and poplar. The soil is all fourth-class and unfit for agricultural purposes. All of the land is covered with bush, consisting principally of spruce and tamarack from 3 to 15 inches in diameter, with underbrush. There are no hay meadows. Water is very plentiful and can be had almost any place at any time of the year on the surface. Boggy river, a stream about 12 feet wide and 3 feet deep, runs through the township in a northwesterly direction, and there are also 3 or 4 smaller creeks but no lakes. All the water is first-class, but there are no waterfalls or rapids of any kind. The township is all level. The climate is the general Manitoba climate, but subject to summer frosts. There are no stone-quarries, minerals, coal nor lignite veins. Fuel, consisting of spruce, tamarack, jackpine, cedar, poplar and birch, both green and dry, is plentiful all through this section of country. Moose, caribou and black bears are very plentiful, and there are also a few smaller fur-bearing animals. There are no trails of any kind running to or through this township.—*J. Molloy, D.L.S., 1909.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 16.—*Continued.*

8. (*North outline.*)—This is generally a rocky and rough country, covered with a second growth of pitch-pine, with occasional patches of spruce, balsam and tamarack. There are a few small swamps, on which there is a growth of small tamarack.—*W. Pearce, D.L.S., 1875.*

(*East outline.*)—The land along this boundary is generally rocky and of fourth-class quality with occasional patches of second-class land in the vicinity of Falcon lake and Falcon river. It is mostly timbered with poplar, spruce, birch, tamarack, cedar, and a few scattered pine. Section 12 is a swamp, timbered with small spruce and tamarack. Falcon lake occupies the greater part of section 36 and a portion of 25. Falcon river, along which there are some fine hay lands, runs in a southeasterly direction through section 13.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—The soil in this township is fourth-class, and consists principally of spruce and tamarack swamps, and some birch, jackpine and poplar ridges. A portion in the northeast corner that is not wet is inclined to be rocky. The land would not be fit for farming or grazing purposes. All of the township is timbered, the greater portion being spruce and tamarack from 3 to 6 inches in diameter, but the northern part has some of larger dimensions in places, there being spruce, tamarack, cedar, birch, poplar and balsam as large as 12 inches in diameter. There is no hay to be found throughout this district. Water is plentiful and can be had almost any place at any time of the year, and is all of first-class quality. Falcon lake extends into the township, from range 17, for a distance of 2 miles in sections 36, 35, 26 and 25. Falcon river, a stream about 15 feet wide, flows from this lake near the northeast corner of section 22, and leaves the township near the northeast corner of section 13, flowing into another large lake in township 8, range 17. There are no waterfalls or rapids from which power could be developed. The climate is the general Manitoba climate but subject to summer frosts. Granite, rock and boulders can be had in the northeast corner of the township. Fuel is plentiful all through this section of country, consisting of spruce, tamarack, poplar and jackpine, both green and dry. There are no coal or lignite veins to be found. Moose, caribou and black bears are very plentiful, as well as a few smaller fur-bearing animals. There are no trails leading to the township.—*J. Molloy, D.L.S., 1909.*

9. (*East outline.*)—The country through which this line passes is generally rough and rocky, and covered with brûlé and occasional patches of green timber, consisting of pitch pine, spruce, tamarack and balsam. There are a number of small swamps on which there is a growth of small spruce and tamarack.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—All of the soil in this township is fourth-class and is unfit for farming purposes, as it consists of rocks and swamps. There is no hay to be found, and if there were, it would be impossible to get it out except in winter on a toboggan, on account of the lakes, swamps and high rocks. Water is very plentiful and of first-class quality in the swamps, lakes and creeks. There are 7 or 8 lakes in this township, but no waterfalls or rapids from which power could be developed. Fuel is very plentiful, as the whole township is covered with spruce, tamarack and jackpine, from 3 to 8 inches in diameter, with brûlé and willow scrub. There are no coal or lignite veins to be found. Stone, consisting of boulders and granite rock, is very plentiful and can be had in almost any part of the township. Moose, caribou and black bears are plentiful and some minks and otters are found. There are no trails or roads of any kind. The Canadian Pacific and Grand Trunk Pacific railways pass through the township to the north.—*J. Molloy, D.L.S., 1908.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 16.—*Continued.*

- (East outline.)*—The country through which this line passes is similar to that
10. along the east boundary of township 10, range 14, east of the Principal
meridian.—*W. Pearce, D.L.S., 1875.*

(Subdivision.)—All the land in this township is fourth-class. About three-quarters of the surface is rock and the remainder swamps, muskegs and lakes. The rocks vary in height from 10 to 60 feet. All of the surface is covered with bush, consisting of spruce, tamarack, jackpine and poplar, varying in diameter from 3 to 10 inches, with scrub. There is scarcely any hay. Water is plentiful and can be had in any of the swamps or muskegs at any time of the year. There are a few creeks and a number of large lakes all containing good water. There are no waterfalls or rapids from which power could be developed. Fuel is very plentiful all through this section of country. There are no coal or lignite veins. The stone consists of granite and boulders. The Canadian Pacific railway passes through the centre of the township in an east to west direction, and the Grand Trunk Pacific passes through the northern tier of sections. There are no trails except a few winter trails which cannot be used in summer.—*J. Molloy, D.L.S., 1908.*

- There are no roads in or leading into this township, but it can be reached
11. conveniently by canoe from the lines of either the Grand Trunk Pacific rail-
way or the Canadian Pacific railway by way of Cross lake. The soil is all
fourth-class and is not suitable for agriculture. The surface is hilly and rocky with
muskegs occurring at intervals. The whole township is covered with timber. A strip
of approximately 1 mile in width along the south boundary of the township has been
burned over and has grown up with smaller timber and scrub. Jackpine, poplar, spruce
and tamarack predominate. The average diameter is about 3 inches. There is no
hay in this township. The lakes and creeks afford an unfailing supply of fresh water
of good quality. The Whiteshell river is the principal stream. It drains Cross lake
and averages 130 feet in width and 6 feet in depth. Its rate of flow is about a mile
and one-half per hour. There is no land likely to be flooded by the stream, but some
of the swamps have very little drainage and are always very wet. At the head of Cross
lake, in the southeast quarter of section 14, there is a rapid with a fall of about 10 feet
where a small water-power could be developed. The natural outlet of the lake lies
about 15 chains southwest of this rapid, but this has already been dammed by the rail-
road construction parties in order to raise the level sufficiently to allow passage by boat
from Cross lake to Nelson lake. The climate is the general Manitoba climate. Summer
frosts occur occasionally. Timber for fuel can be obtained in any part of the town-
ship. There are no coal nor lignite veins. No quarries nor valuable minerals have been
found. Moose, deer, black bears and waterfowl are very plentiful. Jackfish and pike
are abundant in Cross lake.—*J. Molloy, D.L.S., 1911.*

- (North outline.)*—This line commences in heavy spruce, balsam, poplar,
12. tamarack and birch, and in the north boundary of section 31 it runs for 30
chains in Whiteshell river. This stream flows from a lake which lies to the
south of the line at this point. It forms the drainage channel of Whiteshell, Little
Whiteshell and Cross lakes. Throughout the rest of its length the line runs through
a rolling, rocky country covered with pitch-pine, birch, balsam, spruce, poplar and
tamarack, while a few ash occur on the north boundary of section 34. Little White-
shell lake is crossed by the north boundary of section 34. The soil varies from third-
to fourth-class.—*B. J. Saunders, D.L.S., 1908.*

(Subdivision.)—There are no roads leading into this township, but it is easily
accessible by canoe from the lines of either the Grand Trunk Pacific or the Canadian
Pacific railways by way of Cross lake. The soil is all fourth-class and is unsuited for

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Concluded.*

agriculture, with the possible exception of the narrow strips of heavily timbered clay land which border the Whiteshell river in places. The surface is hilly and very rocky, and the township is well timbered throughout. The timber consists of poplar, jack pine, spruce, tamarack, birch and balsam with a small amount of ash and elm. It averages about 7 inches in diameter. All of the merchantable timber that is accessible has been cut, but there still remains a considerable amount of good pulpwood that would be of value if it were possible to get it out. There is no hay in this township. Excellent water is abundant everywhere, there being lakes or streams in nearly every section. The Whiteshell river is the principal stream. It averages about 6 feet in depth and 130 feet in width, and flows about 2 miles per hour. It does not appear to be subject to flooding. A water-power of from 400 to 500 horse-power could be easily developed at the outlet of Mallard lake, as the river flows through a narrow gorge of rock and there is a fall of about 20 feet in 400 feet. The climate is the ordinary Manitoba climate with occasional summer frosts. Wood for fuel can be obtained anywhere in this township. There are no coal or lignite veins. There are no quarries but the surface of this township is largely composed of coarse gneiss, thinly covered with soil. No minerals of value have been discovered. Moose, caribou, deer, black bears and waterfowl are very abundant, and jackfish are plentiful in Whiteshell river and the various lakes.—J. Molloy, D.L.S., 1911.

(*North outline.*)—The country along this line is rocky, broken by muskegs and lakes, and is not suitable for agriculture. The surface is rolling, and is covered with small pitch-pine, spruce, poplar and balsam of no marketable value. Winnipeg river flows across the township from east to west, leaving the township about a mile and a half south of the north boundary. It is not so suitable here for the development of power as it is farther west.—B. J. Saunders, D.L.S., 1907.

(*Subdivision.*)—This township may be described as a heavy, rocky and hilly country mostly covered with bush and generally unfit for settlement. However, some plateaux of good clay soil are found on the shore of Winnipeg river, which runs across the township, and on islands where a few small mixed farms could be established. The hay could be procured along the valleys of small creeks emptying into the river. The timber consists of large poplar, spruce, balsam, birch and tamarack with a thick growth of hazel bush and willow, except in sections 25, 26 and 27, where it is burnt. This timber is suitable for all purposes, but the best is situated on the southern side of the river in a timber berth. Small veins of mica are found everywhere along the south bank of the river. There is no water-power in the township. Fish are abundant, and large game is plentiful. The only practical route to reach this township is by railway from Lac du Bonnet to Point du Bois, and thence by boat up the Winnipeg river. The water in this stream is pure and very deep, with hardly any current for 10 miles up from Point du Bois. The climate is very good.—P. R. A. Belanger, D.L.S., 1911.

RANGE 17.

The greater part of the township is covered by Lake of the Woods. There is very little land on this account, except what is known as Buffalo point, and this is taken up as an Indian reserve, comprising sections 3, 4, 9 and 10. The western tier and a half of sections consists mostly of swamp, and the south half of this belongs to the Indian reserve which is nearly all swamp. Sections 19, 30 and 31 are largely composed of spruce and tamarack swamp with a few poplar ridges. It would not be suitable for farming purposes. Water is very

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 17.—Continued.

plentiful and can be had on the surface almost any place. Fuel is plentiful also, both green and dry, all through this section of country. There are no water-powers of any kind to be found. Game is plentiful, principally moose, deer, black bears and wolves. There are no minerals, stone-quarries, or lignite veins. Warroad, a town on the Canadian Northern railway in the State of Minnesota, is about 8 miles south of the international boundary. There are no trails running through any part of this township.—*J. Molloy, D.L.S., 1909.*

About three-quarters of this township is occupied by Lake of the Woods.

- 2.** The remaining part is mostly spruce and tamarack swamp and along the lake the marsh and muskeg extend back in some places for a distance of a quarter of a mile. None of the land would be suitable for farming or agricultural purposes. The timber is mostly spruce and tamarack, being about 5 inches in diameter. There is no hay in this part of the country. All the water is fresh and is found on the surface. Reed river enters this township near the northwest corner of section 18, and flows into the lake about the centre of section 20. There are no waterfalls. Fuel, both green and dry, is very plentiful all through this section of country. There are no minerals, stone-quarries, coal or lignite veins. Moose, black bears, deer and wolves are very plentiful. The town of Warroad, a station on the Canadian Northern railway in the State of Minnesota, is about 20 miles distant from the mouth of Reed river. There are no trails or roads running through this township.—*J. Molloy, D.L.S., 1909.*

All the soil in this township is fourth-class and could not be used for agri-

- 3.** culture, as it is mostly spruce and tamarack swamps with a few poplar ridges. Nearly all the township is covered with bush or scrub. In the southeastern portion there is some good timber, principally spruce, tamarack and cedar, from 6 inches to 2 feet in diameter. The other parts of the township are covered with scrub and spruce and tamarack from 4 to 10 inches in diameter. There is no hay of any account in this district. Water is plentiful on the surface in almost any quarter-section, and all the water is fresh and of first-class quality. There are no waterfalls of any kind. Fuel, consisting of spruce, tamarack, cedar, birch and poplar, both green and dry, can be had in unlimited quantities all through this section of country. There are no coal or lignite veins, stone-quarries nor minerals of any kind. The climate is the general Manitoba climate, with no indications of summer frosts. Black bears, moose and deer are very plentiful. There are no trails except one or two wood roads, which can be used only in winter.—*J. Molloy, D.L.S., 1909.*

(*North outline.*)—Muskeg, cedar and tamarack swamps prevail with an occa-

- 4.** sional jack pine or poplar ridge. There is a belt of cultivable land on either side of the creek which crosses section 32.—*J. L. Coté, D.L.S., 1898.*

(*Subdivision.*)—The land in the township consists for the greater part of spruce and tamarack swamp, with a few ridges of poplar and jack pine and some small open muskegs. It would not do for agricultural purposes as it is nearly all covered with timber, principally spruce and tamarack with some jack pine, poplar and scrub. The average diameter of the timber is about 7 inches, and it is pretty equally distributed throughout the different sections. The land is nearly all level. The water is plentiful and all of first-class quality. There are two or three small creeks about 4 or 5 feet wide and 2 feet deep. There are no water-powers. Fuel is very plentiful, either green or dry, consisting of spruce and tamarack. The climate is the general Manitoba climate.

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 17.—*Continued.*

There are no minerals, stone-quarries, coal or lignite veins. Hay is scarce. Game is plentiful, principally moose, deer and black bears. There are no trails of any use in this section of country except the Dawson road in township 5, to the north.—*J. Molloy, D.L.S., 1909.*

- 5.** (*East outline.*)—A large part of this line is taken up by Indian reserves and an inlet of Lake of the Woods.

(*Subdivision.*)—The southern part of this township is mostly swamp. There is a belt of good land along a small creek which runs across sections 4, 3, 2 and 1 where it empties into a narrow inlet of Lake of the Woods. The settlement of this township will depend directly on the subsequent drainage.—*J. L. Coté, D.L.S., 1898.*

The Dawson trail, running from Winnipeg through St. Anne, enters this township in section 30 and runs through the southern portion of the township to the northwest angle inlet of Lake of the Woods. It is not passable in summer on account of some large muskegs in ranges 14 and 15. Most of the land is fourth-class as it is nearly all spruce and tamarack swamps with a few poplar ridges. It would not be suitable for farming purposes. All of the surface is covered with timber and scrub, the timber being mostly spruce and tamarack of an average diameter of about 6 inches and fairly well distributed throughout. There is no hay of any account and what there is would be impossible to reach in summer on account of the swamps and lack of trails. All the water is fresh and very plentiful on the surface, but there are no streams. Fuel is very plentiful all through this section of country, both green and dry, and consists principally of spruce and tamarack with some poplar and jack pine. There are no coal or lignite veins, minerals nor stone of any kind. Moose, black bears and deer are very plentiful, and the lakes in the district have a good supply of fish.—*J. Molloy, D.L.S., 1909.*

The only practical route to this township is by way of Lake of the Woods and

- 6.** Shoal lake from Kenora, Ontario. There are no trails leading into or through the township. The land is not fit for agricultural or grazing purposes as it is mostly spruce and tamarack swamps with some open muskeg in the northwesterly corner. There is an abundance of fuel, as the surface is nearly all covered with bush, consisting chiefly of spruce and tamarack from 3 to 10 inches in diameter with scattered jack pine, willow scrub and a few poplars on the ridges. Hay is scarce and it is impossible to harvest what there is on account of the wet nature of the country. Fresh water is plentiful throughout the township. Hay river is a small stream running through the southern part of the township to Shoal lake. There are two or three other small creeks. None of the above is suitable for the development of water-power. There are no stone-quarries nor minerals to be found. Game is plentiful, consisting of moose, deer, black bears and some of the smaller fur-bearing animals. The climate is similar to that of Manitoba generally.—*J. Molloy, D.L.S., 1909.*

(*South outline.*)—The westerly 5 miles of this boundary is a very wet spruce

- 7.** and tamarack swamp with very small timber; the remainder consists chiefly of rocky ridges covered with brûlé. There is no timber of any value.—*W. Pearce, D.L.S., 1875.*

(*Subdivision.*)—The only practical route by which to reach this township is by canoe from the Canadian Pacific railway at either Long Pine lake or Cross lake to Indian bay of Shoal lake. There are no trails through this township. Nearly all the land is fourth-class, being mostly spruce and tamarack swamps, except a few rocky sections in the southeast and northwest corners. With the exception of the southwest quarter, which is mostly swamps and muskeg, covered with tamarack of about 3 inches

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 17.—*Continued.*

in diameter, this township is heavily timbered with spruce, tamarack, jack pine, poplar and birch, from 4 to 18 inches in diameter, and heavy underbrush. The choicest of the timber has been cut but the remainder will supply an abundance of fuel. In the spring the swamps usually hold about 1 foot of water but during this season, which was an exceptionally dry one, all the surface which had formerly been covered with from 6 inches to 2 feet of water became dry, but good water was easily obtainable by digging from 1 to 4 feet. No streams suitable for water-power were found. There are no stone-quarries nor indications of coal or lignite. Game, consisting of moose, deer, bears and ducks, is plentiful. The climate is similar to that of Manitoba generally.—*J. Molloy, D.L.S., 1909.*

(*North outline.*)—Along the northern shore of Falcon lake the country is

- 8.** rough and rocky, and the timber in many places has been killed by fires.—
W. Pearce, D.L.S., 1875.

(*Subdivision.*)—As there are no trails leading to or through this township, it is reached by canoe from the Canadian Pacific railway at Cross lake or Ingolf station. The greater part of the township is rocky, the cliffs being from 10 to 100 feet high; the remainder is mostly spruce and tamarack swamp. The land is all heavily timbered except along the valley of the Falcon river where, to a distance of approximately 5 chains on either side of the river, there is an abundance of hay. The timber is chiefly spruce, tamarack, jack pine, poplar and birch from 6 to 24 inches in diameter. Falcon lake runs along the north boundary and extends in places a mile into the north tier of sections. In the interior there are 2 or 3 small lakes. Generally good water is plentiful on the surface, being from 6 to 18 inches deep, but on account of the extreme dryness of the season, all the land is now dry, it being necessary to dig from 1 to 3 feet for water. No water-power could be developed in this township. There are no stone-quarries nor minerals to be found. Moose and jumping deer are plentiful. Black bears and other fur-bearing animals also abound. Most of the lakes team with fish.—*J. Molloy, D.L.S., 1909.*

The land in this township is practically useless for farming purposes, as

- 9.** the township is wholly composed of swamps, water and rocks which range from 10 to 120 feet in height. Nearly all of the land is timbered, but all

the large timber has been cut. The remaining timber consists principally of jack-pine, spruce and tamarack, averaging about 7 inches in diameter, and undergrown with scrub and bush. It is equally distributed throughout the township. There is no hay. Water is plentiful in the swamps, and there are a number of lakes. West Hawk lake comprises all, or nearly all, of sections 14, 22, 23, 24, 25, 26 and 36, and Falcon lake, on the south boundary, is almost 7 miles long, extending from near the north boundary of section 1 to the northeast corner of section 22, in township 8, range 16, and having an average width of about three-quarters of a mile. Besides these two large lakes there are a number of small ones. The water in all of these lakes and also in the connecting creeks and swamps, is of first-class quality. There are no waterfalls or rapids from which power could be developed. The climate is the general Manitoba climate, but subject to summer frosts. Fuel is plentiful throughout this district, and consists principally of spruce, tamarack and jack pine, both green and dry. There are no coal or lignite veins. Granite and quartzite are plentiful all over the township. There are traces of gold and a number of mines have been located and worked to some extent. Moose, caribou and black bears are very plentiful, as well as small fur-bearing animals. The Canadian Pacific and the Grand Trunk Pacific railways pass through the township to the north of this. There are no trails, and it is only possible to reach the interior of the township by boat in summer and along the lakes in winter.—*J. Molloy, D.L.S., 1909.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 17.—*Continued.*

9 & 10. This district contains little agricultural land. The country consists of rocks interspersed with muskegs and lakes. Many moose, deer, partridges and grouse were noticed. Some timber of value is found in the valleys.—*G. A. Bennett, D.L.S., 1912.*

This township is very similar to those adjoining it in the south and west, **10.** consisting principally of rocks, lakes and swamps, the rocks ranging from 10 to 120 feet in height. It is unfit for farming or grazing purposes. Cross lake comprises a large portion of sections 2, 3, 10, 16, 17, 19 and 20, and lake Nora, another large lake, comprises the greater portion of sections 28, 34, 35 and parts of sections 26, 27 and 33. Besides these, there are 4 or 5 other small lakes. The water in these lakes, as well as in the creeks and swamps, is of first-class quality. There are no waterfalls or rapids from which power could be developed. There is no hay. All the township is covered with timber, although the largest and best has already been cut. The principal kinds are spruce, tamarack and jack pine. These range from 4 to 8 inches in diameter and are mixed with scrub and underbrush. The climate is the general Manitoba climate, but subject to summer frosts. Fuel, of the different varieties of timber already mentioned, is obtainable all through this district, both green and dry. There are no coal or lignite veins. Granite ledges and boulders are plentiful all over the township, but there are no quarries. Traces of gold are found but apparently not in paying quantities. Moose, caribou and black bears are very plentiful, and also small fur-bearing animals. The Canadian Pacific railway passes through the centre of the township, and the Grand Trunk Pacific railway through the northern tier of sections. There are scarcely any trails except old winter trails along the railway.—*J. Molloy, D.L.S., 1909.*

(*North outline.*)—This line runs through a rough, rocky country covered with **12.** pitch-pine, spruce, birch and poplar. A few stretches of tamarack and spruce swamp occur, usually near the lakes, several of which lie close to the line. A lake lies near the north boundary of section 31; two lakes, one north and the other south of the line lie along the north boundary of section 32; and a large lake lying to the north of the line is intersected by sections 33, 34 and 35. The line intersects the Ontario-Manitoba boundary 31 chains east of the northeast corner of section 35.—*B. J. Saunders, D.L.S., 1908.*

This township is most easily reached by boat on the Winnipeg river, either by **15.** going up from the end of the railway at Point du Bois, or down the river from Kenora. The surface is rocky, rolling and hilly and covered with heavy bush, consisting of poplar, spruce, balsam, jack pine and birch intermingled with scrub. The land is not suitable for settlement. No minerals are found. The Winnipeg river teems with fish, such as pike, pickerel and sturgeon.—*P. R. A. Belanger, D.L.S., 1911.*

(*North outline.*)—The country along this line is mostly rock, broken by **16.** numerous lakes and is totally unfit for agriculture. The surface is hilly and rises in places 75 feet above the lakes. The north boundary of sections 33, 24, 35 and 36 crosses 5 lakes, a large lake being situated in the northeast corner. The timber is mostly small, but there is some poplar, birch, tamarack, spruce and pitch-pine, averaging 9 inches in diameter. Winnipeg river flows across the southwest corner of the township. A few miles farther southeast along the river, there are some rapids from which power could be developed.—*B. J. Saunders, D.L.S., 1908.*

TOWNSHIPS EAST OF THE PRINCIPAL MERIDIAN.

RANGE 17—*Concluded.*

(*Subdivision.*)—Only the western half of this township was surveyed. It is a heavy rolling or hilly and rocky country, and is mostly burnt along its northern boundary and on sections 7 and 18, but the remainder is generally timbered with spruce, large poplar, balsam and jack pine, principally on the sections adjoining the Winnipeg river which enters the township in sections 4 and 5, and after running northerly for about $2\frac{1}{2}$ miles turns westerly toward the western boundary. Very little land, if any, will be found suitable for farming, the whole being more or less timbered, and no land can be found desirable for immediate use. Numerous lakes lie in the interior of the township on the northern side of the river. Fish are abundant and large game is plentiful. Minerals of importance were not detected, although numerous small veins of mica were found on the southern shore of the Winnipeg river, and about the meridian in the centre of the township. The only practical way of reaching this township is by the Winnipeg River route, either from Kenora or Point du Bois. By Kenora the river is dangerous and necessitates many portages over rapids and falls which are avoided by the Pointe du Bois route. There is no water-power in this township. The river has, with few exceptions, a very slow current and is easily ascended with row-boats. There is no hay in this township.—P.R.A. Belanger, D.L.S., 1911.

